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ABSTRACT

A study examined the attitudes of 546 randomly selected 10th- and 11th-grade students attending 14 public high schools serving the Spokane Area Vocational Skills Center to determine who and what influenced students' decisions to enroll in the center. Parents, friends, and counselors were ranked as people who influenced the students' interest and enrollment in the skills center, with attenders indicating a more positive influence than nonattenders. Half the students felt that students should first hear of the skills center in ninth grade whereas 26 percent felt they should be made aware of the center in the eighth grade. The center's general brochure, video presentation, and slide show were considered effective methods of informing students about the skills center. Responses from nonattenders indicated that the skills center's image is good. Among those areas of the center's operation that were mentioned as problems were credits for graduation, graduation and college requirements, lack of skills center offerings, science and math requirements, length of the skills center day, and the need for semester classes. A survey of selected members of the area's business community indicated that the curriculum offered at the skills center is now important and will continue to be important in 6 years. (This report includes the student and business survey instruments and the survey computer program.) (MN)

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Final Report

Project 85-AX6(060)NB

Research Factors that Affect Skills Center Enrollment

Research Project in Vocational Education
Conducted Under
Public Law 94-482

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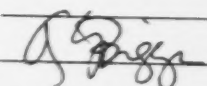
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SKILLS CENTER STUDY INDICATES CHANGES NEEDED

By Ruth B. Abendroth, Ph.D.

Low enrollments in Skills Center has become a concern. Results of a recent study of over 500 Spokane tenth and eleventh graders indicate some changes may be in order.

The Study

Increasing enrollment and meeting student occupational needs were two concerns of the state's skills center staffs. Ten or more years have lapsed since the initial assessment of needs, and an evaluation was necessary to determine recruitment methods that result in optimum student enrollment.

A survey was given to 546 randomly selected tenth and eleventh grade students attending 14 public high schools serving the Spokane Area Vocational Skills Center. The survey consisted of questions concerning who and what made them aware and interested in enrolling in the Skills Center. Other questions answered by nonattenders gave some indication as to why they may not have enrolled in the Skills Center.

Results

All students heard about the Skills Center in the ninth and tenth grades. The largest percent (50 percent) of students felt that other students should first hear about the Skills Center in the ninth grade while 26 percent felt they should hear about the center in the eighth grade.

Not surprisingly, parents, friends and counselors were ranked as people who influenced the students' interest in and enrolling in the Skills Center. Attenders indicated a more positive influence than did nonattenders.

The general brochure, video presentation and slide presentation were ranked as effective methods of informing students about the Skills Center. Other methods--class meeting about the Skills Center, tour, presentation to the students by a Skills Center administrator, open house, brochure, and talk with a Skills Center teacher were only effective on those who were exposed to those methods. In other words, attenders felt those methods were more positive than did the nonattenders. Both groups felt newspaper articles were not effective.

Enrollment procedures were ranked by attenders as being effective. These included meeting with the counselor, applying to the counselor, teacher recommendations and group meetings. The people presenting the information didn't have much of an effect, but the activity seemed to have an effect. In other words, the more the better.

Responses from nonattenders indicated that the Skills Center image was good. They didn't feel the center was for potential dropouts or necessarily for noncollege bound students. Nonattenders indicated that they would be willing to leave their home high school.

Tours, visits with Skills Center teachers and visits to open houses had positive effects on attenders. This indicates that once students are exposed to these influences, they are more apt to want to enroll.

Areas concerning course offerings, credit problems and time spent at the Skills Center had a range of responses from "agree strongly" to "disagree strongly," indicating that at least some students had problems with those areas.

The areas of concern were: credits needed to graduate, graduation requirements, lack of offerings, college requirements, science and math requirements, length of time during the day needed to be at the Skills Center, and semester classes instead of year-long classes.

Recommendations

Analysis of the data indicates that we must continue to wage a large information campaign to students, parents and home high school personnel. If funds are limited, the following groups need to have as much information as we can give them: eighth and ninth graders and their parents, high school students and their parents, home high school teachers and counselors.

Skills Center attenders and graduates seem to have a positive influence on their peers. Skills Center personnel could have their students help disseminate information to friends by encouraging them to come to open houses or spend a day at the Skills Center.

Skills Center instructors had a positive influence on those students who met them. They should visit home high schools to help students and faculty learn more about programs and personalities. It might be a good idea to develop a calendar of events for the Skills Center teachers to use. They could be instrumental in presenting material to the junior high students.

A program about the Skills Center needs to be developed for the junior high students. This program should include a video presentation ending with a tour of the Skills Center. A brochure could be mailed to parents.

Changes in Skills Center offerings should be considered. More student needs may be met by offering short courses or two-hour courses instead of three hours courses. Semester classes may be popular for those who can fit just one semester into their schedule. Skills Centers need to continue to explore cross-crediting in the areas of science and math. We need to explore other ways of dealing with graduation and college requirements. Skills Centers may need to extend their school day to accommodate those students who don't have time to attend. More semester classes should be developed.

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ABSTRACT

A survey was given to 546 randomly selected tenth and eleventh grade students attending 14 public high schools serving the Spokane Area Vocational Skills Center. The survey consisted of questions concerning who and what made them aware and interested in enrolling in the Skills Center. Other questions answered by nonattenders gave some indication as to why they may not have enrolled in the Skills Center.

Results

Fifty percent of the students felt that students should first hear about the Skills Center in the ninth grade while 26 percent felt they should hear about the center in the eighth grade.

Parents, friends and counselors were ranked as people who influenced the students' interests in and enrolling in the Skills Center. Attenders indicated a more positive influence than did nonattenders.

The general brochure, video presentation and slide presentation were ranked as effective methods of informing students about the Skills Center.

Response from nonattenders indicated that the Skills Center image was good. Tours, visits with Skills Center teachers and visits to open houses had positive effects on attenders, indicating that once students are exposed to these influences, they are more apt to want to enroll.

Areas concerning course offerings, credit problems and time spent at the Skills Center had a range of responses from "agree strongly" to "disagree strongly" indicated that at least some students had problems in the areas of credits for graduation, graduation and college requirements, lack of Skills Center offerings, science and math requirements, length of the Skills Center day and need for semester classes.

An industrial survey was given to selected people in business and industry to ascertain the appropriateness of the curriculum. It is indicated from the results that respondents felt the curriculum was important now and would be important in six years.

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STATEMENT OF THE PROBLEM

The skills centers in the state have been serving students from one to ten years. The Spokane Skills Center has been serving students for two years in programs that were designed seven years ago.

Increasing enrollment and meeting student occupational needs are two concerns of the state's skills center staffs. Ten or more years have elapsed since the initial assessment of needs, and an evaluation was necessary to determine recruitment methods that result in optimum student enrollment. Another evaluation of program goals by industry was also needed to assure meeting the needs of industry as well as student occupational needs. In other words, we needed to assess the quality of our programs in relation to students and industry.

BACKGROUND OF THE PROBLEM

Low or Decreased Enrollments. Orville Nelson (1) mentioned that results from his national survey of area vocational schools indicated that only 30 percent of the area vocational-technical schools in the nation had stable enrollment while 34 percent had decreasing enrollment. In our own state, the skills centers are experiencing decreasing or low enrollments.

In 1984-85, the Spokane Area Vocational Skills Center had been in existence for three years and was beginning to experience decreasing enrollment. The Center was built with a capacity of 1000 (500 per session). The enrollment from the previous year had decreased 12, and was at 583, much less than capacity. The Spokane Skills Center was able to handle 800 students with their present program offerings--217 more spots available for students than were filled. Other skills center personnel reported having the same problem.

Business and Industrial Involvement. One of the strengths of vocational education is the involvement of business and industry. When the Spokane Skills Center was being designed in 1974, a survey was taken of the business and industrial needs in the Spokane area. This was 11 years ago. Although we try to keep current by strong involvement with our advisory committees, it was time to conduct a more formal study on the changing needs of these groups.

Gray (2) stated the ". . . the area Vo-Tech offers an essential service to the business and industrial community. Area vo-techs thus play a critical role in addressing America's problems of productivity and her need for economic development. . . . Furthermore, the system is cost-effective." The advisory committees for our fourteen (14) programs continue to tell us of the importance of meeting industrial needs.

With the importance of working closely with business and industry in mind, it was essential that we had current information upon which decisions were based.

The method of gaining this information could be used as a prototype for other skills centers in the state.

GOALS AND OBJECTIVES

Overall goal: Conduct surveys of the business/industrial community and students to ascertain changes needed to improve the Skills Center curriculum and improve student enrollment.

Objectives:

1. Design and conduct a survey of business and industry to ascertain their educational needs.
2. Design and conduct a survey of students in the eight participating school districts to ascertain what techniques help make them aware of the value of skills center programs.
3. Make recommendations on changes in program offerings and techniques for increasing student interest in the Skills Center.

PROJECT DESIGN

Two surveys were conducted, one for business and industry to determine what changes may be needed in the curriculum and one for students to determine who and what makes students interested in the Skills Center.

STUDENT SURVEY

Hypothesis

The following null hypotheses were developed:

1. The following people and methods had no effect on student interest and enrollment in the Skills Center: parents, friends, siblings, Skills Center teachers, home high school teachers, counselors, home high school administrators, Skills Center administrators, general brochures, video tape, slide presentation, class meeting, tour, presentation by skills center administrator, open house, parent brochure, newspaper articles, talk to Skills Center teacher, meeting with counselor, turning application in to counselor, teacher recommendations, and group meetings about the Skills Center.
2. There is no reason for students to be interested in the Skills Center.

The Questionnaire

The following procedures were used to develop and administer the survey. After developing the major areas to be investigated, Skills Center students were interviewed to determine the basic answers to the questions. This questionnaire was then administered to several Skills Center classes for field testing.

Next, each school district involved in the Skills Center consortium was contacted to obtain permission to administer the survey and to obtain approval of the questionnaire. The questionnaire was again revised to fit the needs of the school districts, and then was approved by the Skills Center Administrative Council.

The surveys were then printed.

Student Population

A 10 percent random sample of tenth and eleventh grade students was selected from the public high schools in the consortium. In Table I, the number of students randomly selected and the number of students completing the questionnaire are shown.

TABLE I
STUDENTS SELECTED AND COMPLETING THE QUESTIONNAIRE
BY HIGH SCHOOL

School	Number Selected	Number Completed	Percent
Central Valley	95	95	100
University	80	38	47
Cheney	50	28	56
Deer Park	29	21	72
East Valley	50	38	76
Ferris	73	52	71
Lewis and Clark	60	43	71
Mead	90	51	56
Medical Lake	50	21	42
North Central	70	39	55
Rogers	73	14	19
Shadle Park	78	62	79
West Valley	45	25	55
Jantsch	19	19	100
Total	862	546	63

Of the students surveyed, 298 were tenth graders, 242 were eleventh graders, and 6 were undetermined.

Administration of the Survey

The survey was administered to a random sample of tenth and eleventh grade students in each high school. The students were called to a special meeting and asked to complete the questionnaire in all but one high school. The one high school sent the questionnaire to the student's home with directions and a self-addressed and stamped envelope to return it to the Skills Center. In Table II, the number of respondents who are attending and not attending the Skills Center (in 1985-86) are shown.

TABLE II
RESPONDENTS ATTENDING AND NOT ATTENDING
THE SKILLS CENTER

High School	Number of Students		
	Attend	Not Attend	Total
Central Valley	18	77	95
University	3	35	38
Cheney	4	24	28
Deer Park	2	19	21
East Valley	4	34	38
Ferris	4	48	52
Lewis and Clark	6	37	43
Mead	4	47	51
Medical Lake	2	19	21
North Central	13	26	39
Rogers	0	14	14
Shadle Park	2	60	62
West Valley	3	22	25
TOTAL	65	462	527

Conclusions

It was evident that there were some differences and similarities between the attenders and the nonattenders.

Similarities

All students heard about the Skills Center in the ninth and tenth grades. The largest percent (50 percent) of students felt that other students should first hear about the Skills Center in the ninth grade while 26 percent felt they should hear about the Center in the eighth grade.

Both groups felt the following people had no influence on their interest in the Skills Center: siblings, Skills Center teachers, home high school administrators and Skills Center administrators. In Table III the percent response to these questions is shown.

TABLE III
PEOPLE WHO HAD NO INFLUENCE ON
INTEREST IN THE SKILLS CENTER

People	Percent Response		Total
	Attending	Not Attending	
Siblings			
Very Much	11	5	6
Some	14	10	11
Little	26	12	14
None	49	72	69
Skills Center Tchr.			
Very Much	22	9	10
Some	18	14	15
Little	9	14	14
None	48	62	60
Home High School Administrators			
Very Much	6	3	3
Some	18	13	14
Little	8	19	18
None	65	64	64
Skills Center Administrator			
Very Much	22	10	11
Some	11	14	13
Little	8	14	13
None	58	62	61

Both groups felt that the following people had no influence on their attending the Skills Center: parents, siblings, home high school teacher, home high school administrator, and Skills Center administrator. In Table IV, the percent response to these questions is shown.

TABLE IV
INFLUENCE OF PEOPLE ON STUDENTS'
ENROLLING IN THE SKILLS CENTER

People	Percent Response		All
	Attending	Not Attending	
Parents			
Very Much	38	6	10
Some	20	13	14
Little	20	15	16
None	22	64	59
Siblings			
Very Much	15	4	5
Some	14	6	7
Little	17	12	12
None	52	78	75
Home High School Teacher			
Very Much	17	3	5
Some	17	10	11
Little	17	20	19
None	48	66	64
Home High School Administrator			
Very Much	6	3	3
Some	17	7	8
Little	8	15	14
None	65	74	73
Skills Center Administrator			
Very Much	15	5	7
Some	11	11	11
Little	11	12	12
None	60	71	70

All the students surveyed felt the general brochure, the video tape, and the slide presentation were effective in making them aware of the Skills Center. They felt that newspaper articles were not effective. Table V shows the percentages of responses in each of these areas.

TABLE V
EFFECT OF PUBLIC RELATIONS MATERIALS
ON INTEREST IN THE SKILLS CENTER

Materials	Percent Response		Total
	Attending	Not Attending	
General Brochure			
Very Effective	42	23	25
Somewhat Effective	45	48	48
Not Very Effective	9	16	15
No Effect	3	12	11
Video Tape of Skills Ctr.			
Very Effective	35	20	22
Somewhat Effective	34	38	38
Not Very Effective	0	11	9
No Effect	25	26	26
Slide Presentation of Skills Center			
Very Effective	20	14	15
Somewhat Effective	38	40	40
Not Very Effective	9	15	14
No Effect	25	27	26
Newspaper Articles			
Very Effective	8	2	3
Somewhat Effective	26	17	18
Not Very Effective	20	20	20
No Effect	38	56	54

Differences

There were differences in percentage of response between the attenders and nonattenders in the following areas: influence of parents, friends, counselors, home high school teachers on interest in the Skills Center; influence of friends and counselors on their enrolling in the Skills Center; effect of the class meeting about the Skills Center, the tour, presentation by a Skills Center administrator, open house, parent brochure, and talk to a Skills Center teacher.

In Table VI, the percentages of responses in each of these areas concerning interest are shown. In Table VII, the percentages of responses in each of these areas concerning enrolling are shown.

TABLE VI
INFLUENCE OF PEOPLE ON INTEREST
IN THE SKILLS CENTER

Item	Percent Response		Total
	Attending	Not Attending	
Parents			
Very Much	32	6	9
Some	23	17	18
Little	29	19	18
None	29	58	54
Friends			
Very Much	23	7	9
Some	52	29	32
Little	12	30	28
None	12	34	32
Counselors			
Very Much	35	18	20
Some	34	25	26
Little	14	23	22
None	17	32	30
Home High School Teachers			
Very Much	20	5	7
Some	28	23	24
Little	22	26	25
None	31	45	43

Parents and friends of attenders had more influence on interest in the Skills Center than those who did not attend. Counselors had a variety of influence on all students.

TABLE VII
INFLUENCE OF PEOPLE ON ENROLLING
IN THE SKILLS CENTER

People	Percent Response		Total
	Attending	Not Attending	
Talk to Skills Center Tchr.			
Very Much	26	7	9
Some	38	20	23
Little	3	13	11
None	28	55	52
Friends			
Very Much	20	6	8
Some	37	17	19
Little	22	23	23
None	20	53	49
Counselors			
Very Much	34	9	12
Some	28	16	17
Little	18	21	20
None	18	53	49

Skills Center teachers, friends and counselors had more influence on attenders than on nonattenders.

Each high school has its own method of selecting students. In response to questions concerning selection, students felt that the methods were either positive or had no effect on their enrolling. Table VIII shows the percentage of response in these areas.

TABLE VIII
METHODS OF SELECTING STUDENTS

Item	Percent Response Attendees
Meeting with Counselor	
Positive Effect	57
Negative Effect	5
No Effect	31
Apply to Counselor, No Meeting	
Positive Effect	48
Negative Effect	31
No Effect	37
Teacher Recommendation	
Positive Effect	40
Negative Effect	6
No Effect	45
Group Meeting	
Positive Effect	55
Negative Effect	3
No Effect	31

Students attitudes about the Skills Center may be a reason for not attending the Skills Center. Home high school personnel as well as Skills Center personnel were concerned that a negative attitude about the center, college requirement, or graduation requirements may have an effect on their enrolling.

Students not attending the Skills Center disagreed that the Skills Center was for dropouts. They also disagreed that they didn't like to be away from their home high school. On other questions their percentage of response indicated that at least some agreed with the statements as shown in Table IX.

TABLE IX
REASONS FOR NOT ATTENDING
THE SKILLS CENTER

Item	Percent Response Non Attenders
The amount of credits I need to earn to graduate prevent me from attending.	
Agree Strongly	14
Agree Somewhat	22
Disagree Somewhat	18
Disagree Strongly	44
I am not interested in the Skills Center	
Agree Strongly	23
Agree Somewhat	25
Disagree Somewhat	27
Disagree Strongly	23
I am interested, but there is nothing I want to take at the Skills Center.	
Agree Strongly	14
Agree Somewhat	21
Disagree Somewhat	30
Disagree Strongly	33
I am interested, but entrance requirements for college prevent me from taking Skills Center classes.	
Agree Strongly	18
Agree Somewhat	19
Disagree Somewhat	24
Disagree Strongly	35
I am college bound, and the Skills Center is for those students who are not going to attend college.	
Agree Strongly	13
Agree Somewhat	22
Disagree Somewhat	31
Disagree Strongly	31
I am not interested in the Skills Center because I heard that it is for potential dropouts.	
Agree Strongly	6
Agree Somewhat	12
Disagree Somewhat	21
Disagree Strongly	58

Item	Percent Response Non Attenders
I would go to the Skills Center, but I need to take more math and science.	
Agree Strongly	17
Agree Somewhat	26
Disagree Somewhat	20
Disagree Strongly	32
I would be interested in taking something at the Skills Center if I could attend two periods instead of three.	
Agree Strongly	20
Agree Somewhat	33
Disagree Somewhat	21
Disagree Strongly	24
I would be interested in taking something at the Skills Center if I could attend only one semester.	
Agree Strongly	19
Agree Somewhat	34
Disagree Somewhat	22
Disagree Strongly	23
I prefer classes that are mostly classroom rather than lab.	
Agree Strongly	7
Agree Somewhat	22
Disagree Somewhat	30
Disagree Strongly	39
I would like to attend the Skills Center but graduation requirements prevent my attending.	
Agree Strongly	13
Agree Somewhat	25
Disagree Somewhat	22
Disagree Strongly	39
I don't want to be away from my home high school.	
Agree Strongly	11
Agree Somewhat	18
Disagree Somewhat	23
Disagree Strongly	44

Summary of Conclusions

It is apparent from the number of "no effect" responses that many students may not be getting information about the Skills Center in time to enroll or plan their own educational programs. There were some areas where attenders were more positive than nonattenders indicating either a difference in attitude about The Skills Center or possession of more information.

Specific conclusions are as follows:

1. Inform students about the Skills Center in the eighth and ninth grades.
2. People's influence on interest in the Skills Center were parents, friends, counselors and home high school teachers. Attenders indicated a more positive influence of these people than did nonattenders.
3. People's influence on enrolling in the Skills Center were parents, friends and counselors. Again, the attenders indicated a more positive influence than did nonattenders.
4. The general brochure, video presentation and slide presentation were ranked as effective methods of informing students about the Skills Center.
5. Whatever methods were used by the home high school were effective in getting students enrolled. These included meeting with the counselor, applying the counselor, teacher recommendations and group meetings. The people presenting the information didn't have much of an effect, but the activity seemed to have an effect. In other words, the more the better.
6. Responses from nonattenders indicated that the Skills Center image was good. They didn't feel the Center was for potential dropouts or necessarily for noncollege bound students.
7. Nonattenders indicated that they would be willing to leave their home high school.
8. The range of responses from "agree strongly" to "disagree strongly" indicated that at least some students had problems with the following areas: credits needed to graduate, graduation requirements, lack of offerings, college requirements, science and math requirements, length of time during the day needed to be at the Skills Center (3 periods), and semester classes instead of year-long classes.

9. Tours, visits with Skills Center teachers and visits to open houses had positive effects on attenders. This indicates that once students are exposed to these influences, they are more apt to want to enroll.

Reject Hypotheses

The hypotheses should be rejected due to the results indicating that people and methods do have an effect on students interests and enrolling in the Skills Center. Students do have reasons to not be interested in the Skills Center.

Recommendations

Analysis of the data indicates that we must continue to wage a large information campaign to students, parents and home high school personnel. If funds are limited, the following groups need to have as much information as we can give them: eighth and ninth graders and their parents, home high school teachers and counselors.

Skills Center attenders and graduates seem to have a positive influence on their peers. Skills Center personnel could have their students help disseminate information to friends by encouraging them to come to open houses or spend a day at the Skills Center.

Skills Center instructors had a positive influence on those students who met them. They should visit home high schools to help students and faculty learn more about programs and personalities. It might be a good idea to develop a calendar of events for the Skills Center teachers to use. They could be instrumental in presenting material to the junior high aged students.

A program about the Skills Center needs to be developed for the junior high aged students. This program should include information to parents, a video presentation for groups of students ending with a tour of the Skills Center.

Changes in Skills Center offerings should be considered. More student needs may be met by offering short courses or two-hour courses instead of three hour courses. Semester classes may be popular for those who can fit just one semester into their schedule. Skills Centers need to continue to explore cross-crediting in the areas of science and math. We need to explore other ways of dealing with graduation and college requirements. Skills Centers may need to extend their school day to accommodate those students who don't have time to attend. More semester classes should be developed.

BUSINESS/INDUSTRY SURVEY

Hypothesis

The following null hypothesis was developed for the business/industry survey:

There was no need to change curriculum in each of the program areas.

The Questionnaire

A questionnaire was developed consisting of a list of the major program areas in each program with space for respondents to rate each area "very important," "somewhat important", or "not important." They were to indicate whether each area would be important in six years.

The General Advisory Committee evaluated and discussed the form which was then field tested with several advisory committees. After using their comments and suggestions for revision, the questionnaire was given to advisory committee members to evaluate the programs.

Questionnaires were given from three to nine respondents. Questionnaires from several areas were not received back, even after two attempts by telephone to get them. Results for each program are in the Appendix.

Conclusions

The following conclusions were reached after analysis of the data:

1. All the areas rated by business and industry people were rated as very important or somewhat important.
2. All of the areas were rated as being important in six years.

Accept the null hypothesis since analysis of results indicates there is no need to change curriculum.

Recommendations

After reviewing the questionnaire and the questionnaire results, the following recommendations have been made:

1. Work with business and industry on a regular basis to evaluate programs. Many found the length of the questionnaire prohibitive.
2. Continue to teach the same basic concepts as in previous years, using advisory committees to help update curriculum on a frequent basis.

EVALUATION OF THE PROJECT

Instrument Evaluation

The general advisory committee evaluated the business and industry instrument, making suggestions which were incorporated in the revised questionnaire. After field testing, the instrument was again revised.

The student questionnaire was evaluated by teachers, vocational directors and school district personnel. Their suggestions were incorporated in the final questionnaire. The administrative council approved the final questionnaire.

Recommendation of Changes

Since there were no indications of changes in the curriculum, the General Advisory Committee did not make any. They did recommend a more frequent evaluation, several during the year when the committees regularly meet to update curriculum.

The administrative council reviewed the results of the student questionnaire. They were especially interested in what was happening in their own school districts. They recommended that the results be disseminated to school districts with recommendations.

Computer Program

A computer program for the TRS80 Model III or IV is available for use in analyzing questionnaires. It is included in the packet of information submitted to the Research Coordinating Unit.

REFERENCES

- (1) Nelson, Orville, "The 1984 Area Vo-Tech School," Voc Ed, September 1984, pp.30-32.
- (2) Gray, Callahan, and Rogers, "Variety, Flexibility Responsiveness," Voc Ed, September 1984, pp. 26-29.

APPENDIX

SKILLS CENTER QUESTIONNAIRE

This questionnaire has been developed to determine what factors affect Skills Center enrollment. Please be as accurate as possible.

SECTION I-GENERAL

FOR EACH OF THE FOLLOWING QUESTIONS, CIRCLE THE ONE LETTER THAT BEST DESCRIBES YOUR ANSWER.

1. What grade are you currently in?
 - A. 10
 - B. 11
 - C. 12
2. What high school are you currently attending?
 - A. Central Valley
 - B. University
 - C. Cheney
 - D. Deer Park
 - E. East Valley
 - F. Farn
 - G. Jantech
 - H. Lewis and Clark
 - I. Mead
 - J. Medical Lake
 - K. North Central
 - L. Rogers
 - M. Shadle Park
 - N. West Valley
 - O. Spokane Valley Alternative
 - P. Gonzaga Prep
 - Q. Northwest Christian
 - R. Other, please name _____
3. Are you enrolled in the Skills Center, either currently or for next year?
 - A. Yes
 - B. No
4. What grade were you in when you FIRST HEARD about the Skills Center?
 - A. 8
 - B. 9
 - C. 10
 - D. 11
 - E. Other, please state _____
5. At what grade level should students FIRST BE MADE AWARE of the Skills Center?
 - A. 7
 - B. 8
 - C. 9
 - D. 10
 - E. 11

SECTION II-INTEREST

Circle the one letter that best describes your answer.

WHAT INFLUENCE DID THE FOLLOWING PEOPLE HAVE ON YOUR INTEREST IN THE SKILLS CENTER?

6. Parents/Guardians
 - A. Very much
 - B. Some
 - C. Little
 - D. None
7. Friends
 - A. Very much
 - B. Some
 - C. Little
 - D. None
8. Your brother(s) or sister(s)
 - A. Very much
 - B. Some
 - C. Little
 - D. None
9. Skills Center teacher
 - A. Very much
 - B. Some
 - C. Little
 - D. None
10. Home high school teacher
 - A. Very much
 - B. Some
 - C. Little
 - D. None

11. Counselor
 - A. Very much
 - B. Some
 - C. Little
 - D. None
12. Home high school administrator
 - A. Very much
 - B. Some
 - C. Little
 - D. None
13. Skills Center administrator
 - A. Very much
 - B. Some
 - C. Little
 - D. None

SECTION III-ENROLLMENT IN THE SKILLS CENTER

Circle the one letter that best describes your answer.

HOW MUCH INFLUENCE DID THE FOLLOWING PEOPLE HAVE ON YOUR DECISION ABOUT ENROLLING OR NOT ENROLLING IN THE SKILLS CENTER?

14. Parents/Guardians
 - A. Very much
 - B. Some
 - C. Little
 - D. None
15. Friends
 - A. Very much
 - B. Some
 - C. Little
 - D. None
16. Your brother(s) or sister(s)
 - A. Very much
 - B. Some
 - C. Little
 - D. None
17. Home high school teacher
 - A. Very much
 - B. Some
 - C. Little
 - D. None
18. Counselor
 - A. Very much
 - B. Some
 - C. Little
 - D. None
19. Home high school administrator
 - A. Very much
 - B. Some
 - C. Little
 - D. None
20. Skills Center administrator
 - A. Very much
 - B. Some
 - C. Little
 - D. None

SECTION IV-INFORMATIONAL MATERIALS AND METHODS

Circle the one letter that best describes your answer.

HOW EFFECTIVE WERE THE FOLLOWING MATERIALS AND METHODS IN INFORMING YOU ABOUT THE SKILLS CENTER?

21. General brochure describing all programs offered at the Skills Center.
 - A. Very effective
 - B. Somewhat effective
 - C. Not very effective
 - D. No effect
22. Video tape of the Skills Center
 - A. Very effective
 - B. Somewhat effective
 - C. Not very effective
 - D. No effect

23. Slide presentation of the Skills Center
 A. Very effective
 B. Somewhat effective
 C. Not very effective
 D. No effect
24. Class meeting about the Skills Center
 A. Very effective
 B. Somewhat effective
 C. Not very effective
 D. No effect
25. Tour of the Skills Center
 A. Very effective
 B. Somewhat effective
 C. Not very effective
 D. No effect
26. Presentation to the students by Skills Center administrator
 A. Very effective
 B. Somewhat effective
 C. Not very effective
 D. No effect
27. Open house at the Skills Center
 A. Very effective
 B. Somewhat effective
 C. Not very effective
 D. No effect
28. Brochure mailed to your parents
 A. Very effective
 B. Somewhat effective
 C. Not very effective
 D. No effect
29. Newspaper articles
 A. Very effective
 B. Somewhat effective
 C. Not very effective
 D. No effect
30. Talk with Skills Center teacher
 A. Very effective
 B. Somewhat effective
 C. Not very effective
 D. No effect

IF YOU DID NOT ENROLL IN THE SKILLS CENTER GO TO SECTION VI, QUESTION 35.

SECTION V—METHODS OF ENROLLING

Circle the one letter that best describes your answer.

WHAT EFFECT DID THE FOLLOWING METHODS HAVE ON YOUR DECISION ABOUT ENROLLING IN THE SKILLS CENTER?

31. Meeting with counselor or caseworker
 A. Positive effect
 B. Negative effect
 C. No effect
32. Turn application in to counselor, no meeting
 A. Positive effect
 B. Negative effect
 C. No effect
33. Recommendation from teacher(s)
 A. Positive effect
 B. Negative effect
 C. No effect
34. Group meeting about the Skills Center
 A. Positive effect
 B. Negative effect
 C. No effect

IF YOU ENROLLED IN THE SKILLS CENTER YOU ARE FINISHED WITH THIS QUESTIONNAIRE. DO NOT ANSWER THE QUESTIONS IN THE FOLLOWING SECTION.

SECTION VI—REASONS FOR NOT ENROLLING IN THE SKILLS CENTER.

Circle the one letter that best describes your answer.

35. The amount of credits I need to earn to graduate prevented me from attending the Skills Center.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
36. I am not interested in the Skills Center.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
37. I am interested in the Skills Center, but there is nothing there I want to take.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
38. I am interested, but entrance requirements for college prevent me from taking classes at the Skills Center.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
39. I am college bound, and the Skills Center is for those students who are not going to attend college.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
40. I am not interested in the Skills Center because I heard that it is for potential dropouts.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
41. I would go to the Skills Center, but I need to take more math and science.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
42. I would be interested in taking something at the Skills Center if I could attend two periods instead of three.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
43. I would be interested in taking something at the Skills Center if I could attend only one semester.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
44. I prefer classes that are mostly classroom rather than lab.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
45. I would like to attend the Skills Center, but graduation requirements prevent my attending.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly
46. I don't like to be away from my home high school.
 A. Agree strongly
 B. Agree somewhat
 C. Disagree somewhat
 D. Disagree strongly

THANK YOU VERY MUCH FOR TAKING PART IN OUR SURVEY

BUSINESS AND INDUSTRY SURVEY
WITH RESPONSES

AUTO MECHANICS - ELECTRIC

TOPIC	Average Rating			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	Very Important 1	Somewhat Imp. 2	Not Important 3		
1. <u>BASIC ELECTRICAL THEORY</u>					All major items were marked as being important in six years.
A. Amperage	X				
B. Voltage	X				
C. Resistance	X				
2. <u>USE OF METERS</u>					
A. Volt - Ohm - Amp	X				
3. <u>BATTERIES</u>					
A. Battery Tests	X				
B. Charging Procedures	X				
C. Jump Starts	X				
4. <u>STARTING SYSTEMS</u>					
A. Identify Parts and Functions	X				
B. Disassemble	X				
C. Test	X				
D. Assemble and Test	X				
E. Turn Armature	X				
5. <u>CHARGING SYSTEM</u>					
A. Identify Parts and Function	X				
B. Disassemble and Test	X				
C. Assemble and Test	X				
6. <u>WIRING CIRCUITS</u>					
A. Read Wiring Diagrams	X				
B. Test Circuits	X				
C. Explain Circuits	X				
D. Locate Fuses	X				
E. Solder	X				
F. Describe Printed Circuit	X				
G. Turn Signal Circuit	X				

AUTO MECHANICS - ELECTRIC

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
7. <u>DISTRIBUTORS, IGNITION SYSTEMS, TUNE-UP</u>					
A. Identify Parts and Function	X				
1. Point type					
2. Electronic type					
B. Test Systems	X				
C. Discuss Causes of Failures	X				
D. Disassemble, Test and Assemble Distributors	X				
1. Point type					
2. Electronic type					
E. Centrifugal and Vacuum Advance	X				
8. <u>EMISSIONS</u>					
A. Purpose and Function of Emission Control Devices	X				
B. Test with Infrared Analyzer	X				
9. <u>AIR CONDITIONING</u>					
A. Principles and Components of Air Conditioning System	X				
B. Safety	X				
C. Evacuate and Charge System	X				
10. <u>JOB APPLICATIONS</u>					
11. <u>SAFETY</u>	X				
12. <u>LEADERSHIP</u>					
A. Responsibility	X				
B. Groups	X				
13. <u>CAREER AWARENESS</u>					
A. Related Careers	X				

AUTO MECHANICS - ENGINES AND FUEL SYSTEMS

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. <u>ENGINE FUNDAMENTALS</u>	X				
2. <u>MEASURING INSTRUMENTS</u>					
A. Micrometers	X				
B. Dial Indicators	X				
3. <u>ENGINE ASSEMBLY</u>					
A. Disassemble	X				
B. Inspect	X				
C. Assemble	X				
4. <u>TOOLS</u>					
A. Identify	X				
B. Proper Use		X			
5. <u>HEAD SERVICE</u>					
A. Knurl Valve Guides	X				
B. Face Valves	X				
C. Grind Valve Seats	X				
6. <u>CRANKSHAFTS, CAMSHAFTS, BEARINGS</u>					
A. Purpose	X				
B. Material		X			
C. Repairs		X			
D. Oil Clearances		X			
7. <u>PISTONS - RINGS- PINS</u>					
A. Inspection	X				
B. Purpose and Construction	X				
8. <u>LUBRICATION SYSTEM</u>					
A. Components	X				
B. Inspection	X				
9. <u>COOLING SYSTEM</u>					
A. Identification	X				
B. Operation of Components	X				
1. Inspection					
C. Servicing	X				

AUTO MECHANICS - ENGINES AND FUEL SYSTEMS

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
10. <u>TROUBLESHOOTING</u>	X				
11. <u>AUTO FUELS</u>	X				
<u>AIR CLEANERS</u>	X				
<u>MANIFOLDS</u>	X				
<u>FUEL INJECTION</u>	X				
<u>TROUBLESHOOTING</u>	X				
<u>PRINCIPLES OF CARBURETION</u>	X				
<u>FUEL SUPPLY SYSTEM</u>	X				
<u>CARBURETOR REBUILDING</u>	X				
<u>CARBURETOR CIRCUITS</u>	X				
<u>EXHAUST AND EMISSIONS</u>	X				
A. Auto Fuels	X				
B. Air Cleaners	X				
C. Manifolds	X				
D. Fuel Injection		X			
E. Troubleshooting		X			
F. Principles of Carburetion		X			
G. Fuel Supply System		X			
H. Carburetor Rebuilding		X			
I. Carburetor Circuits		X			
J. Exhaust and Emissions		X			
12. <u>SAFETY</u>	X				
13. <u>JOB SEEKING</u>	X				

AUTO MECHANICS - BRAKE AND FRONT END

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. <u>WHEELS AND TIRES</u>					
A. Identify the parts of a tire and the types of tire plies.	X				
B. Identify tire size markings.	X				
C. Draw tire rotation patterns.	X				
D. Identify abnormal tire tread wear patterns.	X				
E. Measure wheel and tire runout.	X				
F. Remove and replace a tire on a wheel.	X				
2. <u>WHEEL BEARINGS</u>					
A. Types and parts of front wheel bearing assembly.	X				
B. Wheel bearing maintenance including adjustment.	X				
C. Wheel bearing adjustment.	X				
3. <u>WHEEL BALANCING</u>					
A. Advantages of balancing wheels. Static and dynamic balance. Conditions which require rebalancing. Three types of wheel balances.	X				
B. Static balance a tire and wheel assembly.	X				
C. Spin balance a tire and wheel on the car.	X				

AUTO MECHANICS - BRAKE AND FRONT END

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
4. BRAKE SYSTEMS					
A. Parts of a hydraulic brake system with drum brakes.	X				
B. Wheel cylinder components.	X				
C. Wheel cylinder.	X				
D. Replace front drum brake assembly.	X				
E. Replace rear drum brake assembly.	X				
F. Dismantle master cylinder and identify components.	X				
G. Adjust drum brakes.	X				
H. Perform brake system inspection.	X				
I. Machine brake drums.	X				
J. Identify disc brake assembly components.	X				
K. Machine disc brake rotor.	X				
L. Bleed brake system.	X				
M. Parts and the purpose of brakes.	X				
N. Power booster operation.	X				
O. Flare brake tubing.	X				
5. SUSPENSION SYSTEMS					
A. Components of coil spring front suspension system.	X				
B. Components of strut type front suspension.	X				
C. Purpose of front suspension components.	X				
D. Coil spring.	X				
E. Inspect and replace shock absorber.	X				
F. Front suspension for wear.	X				

AUTO MECHANIC - BRAKE AND FRONT END

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
6. <u>STEERING SYSTEM</u>					
A. Steering linkage components.	X				
B. Parts of a Recirculating Ball Nut and Worm steering box.		X			
C. Steering system wear.	X				
D. Steering gear box.	X				
E. Replace tie rod end.	X				
7. <u>WHEEL ALIGNMENT</u>					
A. Wheel alignment angles	X				
B. Three different methods of setting caster.	X				
C. Three different methods of setting camber.	X				
D. The purpose of wheel alignment angles and problems associated with in incorrect alignment angles.	X				
E. Perform three complete wheel alignments.	X				

BUSINESS AND OFFICE

TOPIC	Average Rating			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	Very Important 1	Somewhat Imp. 2	Not Important 3		
1. <u>SAFETY</u>					All items were marked as being important in six years.
A. First aid training		X			
B. Office safety		X			
2. <u>LEADERSHIP/PERSONAL GROWTH</u>					
A. Personal growth	X				
B. Group Leadership	X				
C. FSA			X		
3. <u>HUMAN RELATIONS</u>					
A. Personal interaction	X				
B. Office environment	X				
4. <u>CARE, USE, AND MAINTENANCE OF EQUIPMENT</u>					
A. Proper everyday care and treatment	X				
B. Proper usage	X				
C. Equipment problem solving			X		
5. <u>JOB SEARCH AND EMPLOYABILITY SKILLS</u>					
A. How to get a job offer			X		
B. How to be a good employee			X		
C. Identify jobs that meet personal qualities			X		
6. <u>BUSINESS COMMUNICATIONS</u>					
A. Oral		X			
B. Written		X			

BUSINESS AND OFFICE

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
7. <u>VOCABULARY SKILLS</u>					
A. Executive	X				
B. Legal		X			
C. Medical		X			
8. <u>ADVANCED KEYBOARDING</u>					
A. Executive	X				
B. Legal	X				
C. Medical			X		
D. Forms/formats					
E. Proofreading	X				
9. <u>MACHINE TRANSCRIPTION</u>					
A. Dictation including exact formatting instructions and with no errors		X			
B. Dictation without any instructions and with errors as in a typical office			X		
10. <u>WORD PROCESSING, MAGNA CARD MACHINE, COMPUTERS</u>					
A. Concepts	X				
B. Operation	X				
C. Application			X		
11. <u>ADVANCED SHORTHAND</u>					
A. Dictation		X			
B. Transcription		X			
C. Any style Gregg, ABC, Forkner, Speedwriting		X			

BUSINESS AND OFFICE

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
12. <u>ELECTRONIC CALCULATOR</u>					
A. 10-key pad by touch		X			
B. Calculator functions					
13. <u>SECRETARIAL ACCOUNTING</u>					
A. Business application	X				
B. Personal application		X			
14. <u>OFFICE PROCEDURES</u>					
A. Executive		X			
B. Legal		X			
C. Medical		X			

COSMETOLOGY

TOPIC	Average Rating			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	Very Important 1	Somewhat Imp. 2	Not Important 3		
1. <u>SHAMPOOING AND RINSES</u>					All major items were marked as being important in six years.
A. Draping	X				
B. Brushing	X				
C. Soaping	X				
D. Rinsing	X				
2. <u>SCALP TREATMENT</u>					
A. Coping	X				
B. Brushing	X				
C. Medication used	X				
D. Manipulations	X				
E. Shampooing	X				
F. Style	X				
3. <u>FINGER WAVE</u>					
A. Drape	X				
B. Shampoo	X				
C. Comb smooth	X				
D. Part	X				
E. Use fingers and comb to produce proper wave	X				
4. <u>PIN CURLS</u>					
A. Wet hair	X				
B. Make shaping	X				
C. Place flat pin curl in desired pattern, dry, comb out	X				
D. Same procedure for: Indent pin curl Volume pin curl	X				
5. <u>ETHICS AND PERSONALITY</u>					
A. Attitude	X				
B. Behavior	X				
C. Thoughts	X				
D. Good manners	X				
E. Sense of humor	X				
F. Sincerity in which to serve	X				
G. Voice projection (in person or on the phone)	X				

COSMETOLOGY

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
6. LEADERSHIP DEVELOPMENT					
A. Leading and following	X				
B. Making decisions	X				
C. Organizing and conducting group activities	X				
7. HAIR STYLING					
A. Assess shape of face	X				
B. Determine type of hair	X				
C. Decide which movements to perform	X				
D. Finished product	X				
8. BACTERIOLOGY AND SANITATION					
A. Protection for individual and public	X				
B. Science dealing with study of micro-organism	X				
C. Definition of bacteria			X		
D. Types of bacteria	X				
E. Classification	X				
F. Growth and reproduction	X				
G. How disease spreads	X				
H. Type of protection	X				
9. THEORY OF MASSAGE					
A. Areas of massage	X				
B. Precautions and safety measures	X				
C. Qualifications of operator	X				
D. Basic manipulations and results of each	X				
E. Benefits of massage	X				

COSMETOLOGY

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
10. HAIR SHAPING					
A. Learn implements used and how to manipulate them	X				
B. All safety rules for both the operator and the client	X				
C. Basic patterns in shaping	X				
D. Current patterns in shaping for both men and women	X				
11. BLOW CURLING - IRON CURLING					
A. Learn five types of iron curls and how to obtain them	X				
B. Care of irons and parts of irons	X				
C. Safety measures	X				
D. Practice movements	X				
E. How to put movements together to form desired styles	X				
F. Learn to manipulate brushes and blowers to form curls and styles	X				
12. JOB INTERVIEW					
A. Have resumes prepared	X				
B. Have practice application filled out containing all information needed on hand	X				
C. Dress properly	X				
D. Proper manners	X				
E. Firm handshakes	X				
F. Eye contact	X				

COSMETOLOGY

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. <u>MANICURING</u>					
A. Table setup	X				
B. Remove nail polish	X				
C. Shaping of nails	X				
D. Care of cuticle	X				
E. Treating fingernails and toenails	X				
F. Give hand, arm, and leg massage	X				
G. Application of cosmet- ics	X				
H. Apply artificial nails	X				
2. <u>THEORY OF FACIAL MASSAGE</u>					
A. Prepare model	X				
B. Set up equipment, implements, and materials	X				
C. Analyze skin	X				
D. Cleanse and massage face	X				
E. Practice sanitation	X				
F. Apply masks and packs	X				
3. <u>FACIAL MAKEUP</u>					
A. Prepare model	X				
B. Cleanse face	X				
C. Analyze facial fea- tures	X				
D. Apply makeup	X				
4. <u>FALSE EYELASHES</u>					
A. Prepare model	X				
B. Gather all materials	X				
C. Sanitize	X				
D. Apply top lash	X				
E. Apply bottom lash	X				
5. <u>SUPERFLUOUS HAIR REMOVAL</u>					
A. Prepare model	X				
B. Cleanse skin area	X				
C. Prepare depilatories or tools	X				

COSMETOLOGY

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
6. LASH AND BROW TINTING					
A. Set up materials and implements	X				
B. Prepare model	X				
C. Prepare areas to be serviced	X				
D. Apply cosmetics involved	X				
7. HYGIENE AND GOOD GROOMING					
A. Difference between personal and public hygiene	X				
B. Beauty and health problems	X				
C. Proper dress	X				
8. VISUAL POISE					
A. Incorrect and correct posture	X				
B. Defective body posture	X				
C. Posture when giving shampoos	X				
D. Sitting posture	X				
E. Lifting technique	X				
F. Care of feet	X				
9. PERSONALITY DEVELOPMENT					
A. Attitude regarding personality	X				
B. Behavior regarding temperament	X				
C. Voice and conversation	X				
10. PROFESSIONAL ETHICS					
A. Ethical conduct	X				
B. Professional attitudes	X				
C. Successfulness	X				

COSMETOLOGY

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
11. BACTERIOLOGY AND STERILIZATION					
A. Types of bacteria	X				
B. Classification or harmful and beneficial	X				
C. Methods of sterilization and sanitation	X				
D. Chemical sanitizing agents	X				
E. Safety and sanitizing rules	X				
12. CELLS					
A. Parts of cells	X				
B. Cell growth	X				
C. Tissues-organs-systems	X				
13. SKIN AND DISORDERS OF THE SKIN					
A. Histology of the skin	X				
B. Nerves of the skin	X				
C. Definitions pertaining to the skin disorders	X				
D. Definitions pertaining to disease and disorders	X				
14. ANATOMY					
A. Anatomy and physiology	X				
B. Skeletal system	X				
C. Muscular system	X				
D. Nervous system	X				
15. LEADERSHIP DEVELOPMENT					
A. Leading and following	X				
B. Organizing and conducting group activities	X				
C. Make decisions	X				

COSMETOLOGY

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
16. <u>PH AND SYSTEMS</u>					
A. Define PH in terms of basic chemistry	X				
B. Effects in hair and skin	X				
17. <u>JOB APPLICATION</u>					
A. Compile job data	X				
B. Print out application	X				
C. Verbal interview	X				

DENTAL ASSISTING

TOPIC	Average Rating			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	Very Important 1	Somewhat Imp. 2	Not Important 3		
1. <u>ORIENTATION</u>					All items were marked as being important in six years.
A. Importance of the dental assistant in a dental practice	X				
B. Need for dental care	X				
C. Demand for auxiliary personnel	X				
D. Extended functions	X				
E. Observing the policies of the school and the dental assisting department	X				
2. <u>HISTORY OF DENTISTRY</u>					
A. History of dentistry during early times	X				
1. Egyptians					
2. Greeks					
3. Romans					
B. Dentistry through middle ages	X				
C. Dentistry during the renaissance period	X				
D. Dentistry in the United States	X				
1. people who contributed					
2. events and development					
3. <u>STUDENT LEADERSHIP</u>					
A. Develop leadership skills	X				
B. Lead and follow	X				
C. Personal growth	X				
D. Organize and conduct group activities	X				
E. working with others	X				
F. Make decisions	X				

DENTAL ASSISTING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
4. <u>COMMUNICATION SKILLS</u>					
A. The what and why of communication	X				
B. Important personal factors for development of good communication skills	X				
C. Verbal communication	X				
D. Nonverbal communication	X				
E. Listening	X				
5. <u>INTERPERSONAL RELATIONSHIP</u>					
A. Working together as a health team	X				
1. roles					
2. responsibilities					
B. Patient relationship	X				
1. roles					
2. responsibilities					
C. Dental psychology		X			
1. types of behavior					
2. Maslow's hierarchy of basic motivational needs					
3. understanding patient behavior					
4. identify stress coping mechanism					
6. <u>DENTAL PROFESSIONAL ETHICS</u>					
A. Define and describe professional terms		X			
B. ADA and ADAA ethics and jurisprudence	X				

DENTAL ASSISTING

TOPIC	Very Important	Somewhat Imp	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
C. Washington State Dental Practice Act	X				
D. Malpractice	X				
E. Professional conduct	X				
F. Responsibilities and rights of the dental patient	X				
7. PERSONAL WORK SKILLS AND SAFETY					
A. Fire prevention and safety rules	X				
B. Routine clinic safety rules	X				
1. equipment and instruments					
2. personal					
3. dental material					
C. Emergency clinical safety	X				
1. procedure to follow in case of a clinical emergency					
2. ways to prevent clinical emergencies					
8. BASIC SKILLS FOR PATIENT MANAGEMENT					
A. Seat the dental patient	X				
B. Position assistant and operator	X				
C. Microbiology	X				
D. Sterilization and disinfection	X				
E. Five instrument grasps		X			
F. Mouth mirror	X				

DENTAL ASSISTING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
G. Maintain operating field	X				
H. Anatomy of periodontium	X				
I. Preventive dentistry	X				
1. self care I					
2. fluoride					
J. Examine detition	X				
9. CHAIRSIDE RELATED SKILLS					
A. Demonstrate use of correct terminology	X				
B. Describe the cells, tissues and organs of the body and list the functions of each	X				
C. Identify the nine body systems. name the organs composing them and relate the function of each	X				
D. Locate and identify the major anatomical landmarks of the head, neck, and oral cavity		X			
E. Describe the development of the oral cavity and the teeth from the initiation stage through eruption stage		X			
F. General relationship of teeth to the supporting tissues		X			
G. Primary and permanent teeth in the maxillary and mandibular arches		X			

DENTAL ASSISTING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
H. Anatomical features of primary and permanent teeth	X				
I. Chart and record conditions of the oral cavity	X				
10. RADIOLOGY THEORY AND TECHNIQUES					
A. Introduction of radiology	X				
B. Safety procedures	X				
C. Dental X-ray unit	X				
E. X-ray film	X				
F. X-ray film image qualities	X				
G. Processing exposed film	X				
H. Anatomical landmarks	X				
I. Film placement and patient position	X				
J. Angulation of the X-ray cone	X				
K. Professionalism	X				
11. INSTRUMENT IDENTIFICATION AND USE					
A. Familiarization, nomenclature and use of hand instruments and burs		X			
B. Armamentarium and sequence of procedures using tray setups		X			
C. Fulcrum			X		
1. establish a stable rest for the hand					

DENTAL ASSISTING

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. establish control for hand instrument					
D. Instrument transfer	X				
E. Dental handpieces		X			
12. <u>CHAIRSIDE ASSISTING FOR GENERAL PROCEDURES</u>					
A. Place topical anesthetic	X				
B. Assist with local anesthetic	X				
C. Manipulate restorative materials	X				
D. Manipulate cements bases and liners	X				
13. <u>INTERNSHIP</u>	X				
14. <u>EMPLOYMENT SEEKING</u>					
A. Determine best employment situation for them	X				
B. List what they have to offer	X				
C. Locating employment opportunities	X				
D. Write a resume	X				
E. Discuss how to prepare for and present themselves for an interview	X				

ELECTRONICS

TOPIC	Average Rating			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	very Important 1	Somewhat Imp. 2	Not Important 3		
1. <u>DC CIRCUITS</u>					All major items were marked as being important in six years.
A. Electrical and mechanical safety	X				
B. Use and care of tools	X				
C. Leadership	X				
1. group career awareness					
2. self-assessment					
D. Electrical current	X				
E. Technical mathematics	X				
F. Voltage	X				
G. Leadership	X				
1. choosing a career					
H. Basic soldering techniques	X				
I. Resistance	X				
J. Basic troubleshooting techniques	X				
K. Solid-state soldering techniques	X				
L. Ohm's law	X				
M. Technical mathematics	X				
N. DC circuit calculations	X				
O. Leadership	X				
1. occupational analysis					
P. Inductance and capacitance	X				
Q. Technical mathematics	X				
2. <u>AC CIRCUITS</u>					
A. Alternating current	X				
B. Basic AC measurements		X			

ELECTRONICS

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
C. AC troubleshooting techniques	X				
D. Technical algebra and trigonometry	X				
E. Leadership	X				
1. human relations					
F. Capacitive circuits		X			
G. Technical algebra	X				
H. Inductive circuits		X			
I. Technical algebra	X				
J. Leadership	X				
1. securing employment					
K. Transformers	X				
L. Technical algebra		X			
M. Tuned circuits		X			
N. Technical algebra	X				
O. Leadership	X				
1. draft resume due					
3. SEMICONDUCTORS					
A. Semiconductor fundamentals	X				
B. Semiconductor diodes	X				
C. Zener diodes	X				
D. Semiconductor devices	X				
E. Bipolar transistors	X				
F. Circuit board construction methods	X				
G. Bipolar transistor configurations	X				
H. Field effect transistors	X				
I. Thyristors	X				
J. Personal evaluation report due	X				
K. Integrated circuit fundamentals	X				
L. Final deliverable resume due	X				

ELECTRONICS

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
M. Optoelectronic devices	X				
N. Personal electronics project due	X				

FOOD SERVICE

TOPIC	Average Rating			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	Very Important 1	Somewhat Imp. 2	Not Important 3		
1. <u>FOOD SERVICE - GENERAL INFORMATION</u>					All items were marked as being important in six years.
A. Food service establishments		X			
B. Sanitation and safety precautions of personnel and equipment	X				
C. Washing and sanitation of equipment	X				
D. Storage and issue of foods	X				
E. General principles of food production	X				
F. Specific principles of food production	X				
G. Table service	X				
H. Food poisoning	X				
I. Nutrition	X				
J. Purchasing and receiving of foods	X				
K. Menu planning	X				
L. Food processing	X				
M. Financial records and statements	X				
N. Application	X				
O. Resume	X				
P. Job search	X				
Q. Vocabulary	X				
R. Continuing education			X		
2. <u>FOOD SERVICE - WAITER/ WAITRESS</u>					
A. Restaurant terms	X				
B. Personal appearance	X				
C. Table setting	X				
D. Employee relations (communication skills)	X				
E. Types of table service and food display	X				
F. Stations	X				

FOOD SERVICE

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
G. Side work	X				
H. Seating	X				
I. Taking and placing orders	X				
J. Serving	X				
K. Customer relations (communication skills)	X				
L. Safety	X				
M. Sanitation	X				
N. Beverage service	X				
O. Handling payment and tip	X				
<u>3. HUMAN AWARENESS</u>					
A. Potential vs. effectiveness	X				
B. Awareness and conditioning	X				
C. How you think	X				
D. Attitudes and self-image	X				
E. Visualization	X				
F. Self-esteem	X				
G. Self-motivation	X				
H. Goal setting	X				
I. Developing a plan of action	X				
J. Thought patterns of winners	X				
<u>4. MONEY REGISTER</u>					
A. Count change/value of money	X				
B. Count cash boxes	X				
C. Add cost of items	X				
D. Give change back (count)	X				
E. Run register	X				
F. Math	X				

FOOD SERVICE

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
4. <u>PRODUCTION</u>					
A. Location of items			X		
B. Laundry					
C. Making drinks (coffee, juice, etc.)		X			
D. Cleaning machinery, tools	X				
E. Preparation of food	X				
F. Set up work areas - dining room	X				
G. Service	X				
H. Clean up - housekeeping	X				
5. <u>FOOD SERVICE</u>					
A. Food service orientation	X				
B. Equipment identification	X				
C. Sanitation and safety	X				
D. Employment opportunities		X			
E. Basic bread baking		X			
F. Sandwich preparation		X			
G. Soup	X				
H. Sauces	X				
I. Sweet Doughs		X			
J. Frying	X				
K. Meats	X				
L. Poultry	X				
M. Puff dough	X				
N. Vegetable preparation	X				
O. Starch preparation	X				
P. Salad preparation	X				
Q. Cookies		X			
R. Pies	X				
S. Cake baking		X			
T. Cake decorating	X				
U. Pateacidou - eclair paste		X			

FOOD SERVICE

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
V. Fast food	X				
W. Menu planning		X			
X. Flours		X			
Y. Sugars	X				
Z. Shortening		X			
AA. Yeast	X				
BB. Buffet Service		X			
CC. Broiling	X				
DD. Method of cooking dry heat	X				
EE. Stocks	X				
FF. Fresh fruit	X				
GG. Leadership	X				

NURSING	Average Rating			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	Very Important	Somewhat Imp.	Not Important		
TOPIC	1	2	3		
1. <u>CLASSROOM INSTRUCTION</u>					All major items were marked as being important in six years.
A. Introduction	X				
B. Health concepts	X				
C. Body mechanics	X				
D. Medical asepsis	X				
E. Safety and comfort	X				
F. Legal aspects	X				
G. Bathing, back rubs and bedmaking	X				
H. Rest and activity	X				
I. Charting care plans	X				
J. Vital signs	X				
K. Elimination	X				
L. Surgical asepsis	X				
M. Wound healing	X				
N. I.V. maintenance	X				
O. Admission and discharge	X				
P. Pharmacology (optional)	X				
Q. Nutrition	X				
R. Isolation techniques	X				
S. Heat and cold applications	X				
T. Behaviors	X				
U. Sensory deprivation	X				
V. Aging process	X				
W. Pain, comfort and sleep	X				
2. <u>ANATOMY</u>					
A. Introduction to body as a whole	X				
B. Cells, tissues, membranes, integuments	X				
C. Skeletal system	X				
D. Respiratory system	X				
E. Circulatory and lymphatic system	X				
F. Digestive system	X				
G. Excretory system	X				
H. Reproductive system	X				
I. Endocrine system	X				
J. Nervous system	X				

NURSING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
3. <u>CLINICAL EXPERIENCE</u>					
A. Utilization of nursing principles efficiently in meeting patients needs.		X			
B. Discretion regarding personal vocational relationships.		X			
4. <u>COMMUNICATIONS</u>					
A. Verbal and nonverable		X			
B. Therapeutic communication techniques		X			
C. Client needs and develop- mental stages		X			
D. Nursing Intervention and principles		X			
E. Individual study units (Supplements for indiv- idual student goals)		X			

WELDING

TOPIC	Average Rating			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	Very Important 1	Somewhat Imp. 2	Not Important 3		
1. <u>SAFETY</u>					All major items were marked as being important in six years.
A. Proper clothing	X				
B. Proper use of hand tools	X				
C. Proper use of machinery	X				
D. Proper use of welding equipment	X				
2. <u>LEADERSHIP</u>					
A. Learn to work with others	X				
B. Learn to within groups	X				
C. Electing a foreman			X		
D. Electing a safetyman			X		
E. Learning toolroom responsibility		X			
3. <u>TOOLS OF TRADE</u>					
A. Helmet, goggles, hammers	X				
B. Life belts and lines			X		
C. Miscellaneous tools	X				
4. <u>RELEATED PERSONAL QUALIFICATIONS</u>					
A. Physical conditioning		X			
B. Mental conditioning	X				
5. <u>CONTRACTS</u>					
A. Student rights					
B. Student contract					
6. <u>COURSE CONTENT</u>					
A. Entire course for the year		X			
7. <u>GAS WELDING</u>					
A. Puddle welding	X				
B. Butt welding	X				

WELDING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
C. Lap welding	X				
D. Tee Welding	X				
E. Vertical welding	X				
8. <u>GAS BRAZING</u>					
A. Puddle brazing	X				
B. Butt brazing	X				
C. Lap brazing	X				
9. <u>ARC WELDING</u>					
A. Flat welding	X				
B. Horizontal welding	X				
C. Vertical welding	X				
D. Overhead welding	X				
10. <u>DESTRUCTIVE TEST METHODS</u>					
A. Bend test methods		X			
B. Fracture test methods		X			
11. <u>NONDESTRUCTIVE TEST METHODS</u>					
A. Radiography		X			
B. Magnetic particle		X			
C. Die penetrant		X			
E. Ultrasonic		X			
12. <u>METALLURGY</u>					
A. Content of ferrous metal		X			
B. Content of nonferrous metal		X			
13. <u>MIG</u>		X			
A. Ferrous material					
B. Nonferrous material		X			

WELDING

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
14. <u>TIG</u>					
A. Ferrous material			X		
B. Nonferrous material	X				
15. <u>OTHER WELDING PROCESSES</u>					
A. Underwater welding process			X		
B. Carbon arc process			X		
16. <u>BLUEPRINT READING - ESTIMATING</u>					
A. Use of scales in regards to blueprints	X				
B. Use of calculators to compute weights	X				
17. <u>LAYOUT AND FABRICATION</u>					
A. Templates	X				
B. Proper hole dimensions	X				
C. Fabrication procedures	X				
18. <u>GAS CUTTING</u>	X				
19. <u>CARE AND USE OF EQUIPMENT</u>	X				
20. <u>CERTIFICATION</u>	X				

BUSINESS AND INDUSTRY SURVEY
WITHOUT RESPONSES

AUTO BODY

TOPIC	Very Important 1 Somewhat Imp. 2 Not Important 3	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
1. <u>BODY SHOP AS A BUSINESS</u> A. The Auto Body Shop Business 1. Locating a body shop 2. Designing a body shop 3. Equipping a body shop 4. Equipping the office B. Estimating and Insurance 1. Estimating in general 2. The written estimate 3. Collision parts manuals 4. Microfilm estimators 5. Computer estimates 6. Typical estimates 7. Parts availability 8. Insurance C. Body Shop Jobs and Personnel 1. Shop owner 2. Shop manager 3. Body mechanic 4. Specialist 5. Qualifications for auto body repair work D. Advantages of Body Shop Work 1. Body shop office workers 2. <u>BODY WORKING TOOLS</u> A. Hand Tools 1. Personal tools 2. Shop tools			

AUTO BODY

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
B. Power Tools and Shop Equipment 1. Power jacks 2. Air supply equipment 3. Air-powered tools 4. Electric tools C. Air Supply Equipment 1. Uses of air 2. How air is compressed 3. Air lines 4. Separator-regulators 5. Air hoses					
3. <u>BODY SHOP MATERIALS</u>					
A. Body Fillers 1. Types of fillers 2. Plastic fillers 3. Fiberglass fillers 4. Body solder 5. Foam filler B. Body Abrasives 1. Grinding discs 2. Sandpaper 3. Cutting compound C. Body Leaks and Sealers 1. Body leaks 2. Leak tests 3. Sources of body leaks					
4. <u>USING HEAT TO WORK METAL</u>					
A. Oxy-acetylene Welding Equipment 1. Gas cylinders 2. Regulators 3. Hoses 4. Torch blowpipes 5. Welding tips 6. Welding accessories					

AUTO BODY

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
B. Oxy-acetylene Welding and Cutting					
1. Oxy-acetylene Welding principles					
2. Basic oxy-acetylene Welding					
3. Welding positions					
4. Types of weld joints					
5. Oxy-acetylene cutting principles					
6. Aluminum welding					
C. Brazing and Heat Shrinking					
1. Brazing principles					
2. Brazing thin metal					
3. Brazing thick metal					
4. A typical brazing job					
5. Heat shrinking					
6. Shrinking aluminum					
D. Arc Welding					
1. Conventional arc welders					
2. MIG welders					
3. Resistance spot welders					
5. MAJOR REPAIRS					
A. Bumper Assemblies					
1. Bumper parts					
2. Bumper repairs					
3. Impact-absorbing bumpers					
4. Soft-face bumper cover repair					
B. Frame Straightening					
1. The vehicle frame					
2. Frame alignment					
3. Types of frame-straightening equipment					

AUTO BODY

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
4. Frame-straightening preparation					
5. Frame damage estimation					
6. Frame gauges					
7. Introduction to frame straightening					
8. Basic frame-straightening jobs					
9. Alignment with a bench system					
10. The MacPherson strut system					
C. Major Body Repairs					
1. Vehicle bodies					
2. Basic aligning principles					
3. Damaged vehicle alignment					
4. Quarter-panel sectioning					
5. Lightweight panels					
6. Major side damage					
6. MINOR REPAIRS					
A. Basic Metal Straightening					
1. Basic straightening methods					
2. Leveling before refinishing					
3. Typical minor repairs					
B. Plastic Panels					
1. Plastic resins					
2. Identifying plastics					
3. Achieving a quality weld					
4. Using the plastic welder					
5. Replacing plastic parts by welding					

AUTO BODY

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
6. Repairing bumper covers					
7. Repairing A fiber-glass panel					
C. Aluminum Panel Damage					
1. Estimating aluminum damage					
2. Repairing and aligning panels					
3. Welding and repairing an aluminum deck lid					
D. Body Panel Adjustments					
1. How adjustments are made					
2. Hood adjustments					
3. Front fender adjustments					
4. Door alignment					
5. Deck lid alignment					
E. Repairing Rust Damage					
1. Types of rust damage					
2. Metal conditioner					
3. Rust-out repair					
F. Auto Body Trim					
1. Exterior trim					
2. Interior trim					
3. Vinyl top refinishing					
G. Automotive Glass Work					
1. Fixed glass					
2. Movable glass					
7. AUTOMOTIVE PAINTING					
A. Automotive Painting and Equipment					
1. A brief history of factory finishes					
2. Painting equipment					
3. Masking					

AUTO BODY

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
B. Automotive Paint and Paint Products					
1. Paint ingredients					
2. Types of paint					
3. Vinyl paint as protection					
4. Base coat/clear coat paint					
5. Undercoats					
6. Topcoats					
7. Paint vehicles					
8. Solvents					
C. Preparing the Surface for Paint					
1. Preparing unpainted surfaces					
2. Preparing painted surfaces					
D. Applying Automotive Paint					
1. Original paint types					
2. Matching paint types					
3. Matching color					
4. Matching metallic paints					
5. Preventing dirty paint					
6. Using a spray gun					
7. Recognizing spray gun problems					
8. Cleaning the gun					
9. Recognizing paint problems					
E. Paint Rub-out and Restoration					
1. New finishes					
2. Older finishes					
3. Paint repair and protection products					
4. Compound application					

AUTO BODY

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
4. Polishishing					
5. Wax and cleaner/wax application					
6. Accent stripes					
7. Decals and adhesive strip tape					
8. Woodgrain installation					

BROADCASTING (FIRST YEAR)

TOPIC	Very Important	Somehat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. <u>SAFETY</u>					
A. No eating and drinking around equipment.					
B. Be careful around wires and cables.					
2. <u>USE AND CARE OF EQUIPMENT</u>					
A. Keep all equipment as dust free as possible					
B. How to clean recording heads					
C. Proper use of equipment					
3. <u>LEADERSHIP - PERSONAL GROWTH</u>					
A. Lead and follow					
B. In charge of groups					
C. Make decisions					
D. Take orders					
4. <u>BEING EMPLOYABLE</u>					
A. Dress properly					
B. Be on time					
C. Follow orders					
D. How to write a resume					
E. The interview					
5. <u>SUBJECT MATTER</u>					
A. History					
B. Speech (diaphragmatic breathing)					
C. Vocabulary					
D. Pronunciation					
E. Copywriting					
F. News - Sports - Interviewing (delivery and writing)					
G. Sales					
H. Programming - Production					

BROADCASTING

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
I. Studio operation (radio and TV)					
J. Station operation					
K. FCC rules and regulations					
L. Being employable					
M. Learning to communicate with others					
N. Producing radio and TV shows					
<u>SECOND YEAR COURSE</u>					
1. <u>SAFETY</u>					
A. Proper care of remote equipment					
B. Proper covering on equipment when transporting					
2. <u>MAINTENANCE</u>					
A. Make sure all the bolts and screws are tightened on all the equipment					
B. Replacement of batteries and fuses					
3. <u>LEADERSHIP - STUDENT ASSISTANT</u>					
A. In charge of productions outside of the classroom					
B. Help with instructions to first year students					
C. Internship (radio and TV stations)					

BROADCASTING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
5. <u>BEING EMPLOYABLE</u>					
A. Being on time					
B. Looking good					
C. Being able to perform different tasks					
D. Flexibility in hour schedule					
6. <u>ON THE JOB</u>					
A. Spend one class period at least two times monthly performing task at radio and TV station					

COMMERCIAL ART

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. <u>ORIENTATION</u> A. Expectations of students B. Course outline C. Commercial art careers					
2. <u>DRAWING</u> A. Pencil drawing 1. Handle pencil 2. Recognize visually B. Spontaneous response of eye-hand coordination C. Drawing objects 1. Objects as they exist in space 2. Making objects look realistic D. Drawing the alphabet 1. Lettering typefaces 2. Letter strokes, width, length, height, weight, character					
3. <u>CALIGRAPHY</u> A. Personal style B. Basics					
4. <u>BRUSH LETTERING</u> A. Various forms of the alphabet B. Developing a "good hand"					
5. <u>TYPEFACES</u> A. Points B. Picas C. Copyfitting					

COMMERCIAL ART

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
6. <u>LAYOUT DESIGN</u> A. Thumbnails B. Creative thinking C. Ideas, concepts D. Imagination					
7. <u>LOGO DESIGN</u> A. Ad layout					
8. <u>ADVERTISING LAYOUT</u> A. For reproduction B. Paste-up C. Camera ready					
9. <u>PROCESS CAMERA</u>					
10. <u>AIRBRUSH (introduction)</u> A. Characteristics B. Requirements C. Applications					
11. <u>TWO POINT PERSPECTIVE</u> A. Depth in space B. Horizon, point of view, vanishing points C. Drawing size of object away from viewer D. Buildings, equipment					
12. <u>POSTER DESIGN</u> A. Layout B. Speedball lettering C. Brush lettering					
13. <u>LOGO FINISHED IN AIRBRUSH</u> A. Logo of own name B. Poster of all phases					
14. <u>ACRYLIC PAINTING TECH- NIQUES</u>					

COMMERCIAL ART

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
15. <u>MECHANICALS</u> A. Thumbnails B. Enlarging drawing C. Making the drawing production size D. Specifying three colors E. Cutting each color					
16. <u>TECHNICAL DRAWING</u> A. On vellum (polyester drafting film)					
17. <u>PORTFOLIO</u> A. Show samples of qual- ity and workmanship					

COMPUTER PROGRAMMING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
Q. Other programming languages					
R. Application packages					
S. Program development					
T. Coding the program					
U. Translating a source program					
V. Compilers					
W. Interpreters					
X. Coding quality programs					
Y. Testing the program					
Z. Creating test data					
AA. Testing sequence					
BB. Stub testing					
CC. Assuring program correctness					
DD. Program documentation					
EE. Operating systems					
FF. Control programs					
GG. Processing programs					
HH. Data management programs					
II. Virtual storage					
13. THE FUTURE OF COMPUTERS IN SOCIETY					
A. Problems in the data processing industry					
B. Advances in technology					
C. Problems with computer software					
D. The need for professional standards					
E. Professional ethics and crime					
F. Computers in society					
G. Data banks					
H. Electronic funds transfer systems					
I. Controversial issues in data processing					

COMPUTER PROGRAMMING

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
P. Counters, accumulators and printing final totals					
Q. Multiple comparisons - use of record codes					
R. Searching a table					
S. Controls breaks					
T. Merging two files					
U. Decision tables					
12. PROGRAMMING LANGUAGES - CODING AND TESTING PROGRAMS					
A. Major programming languages					
B. Assembler language					
C. Advantages and disadvantages of assembler language					
D. Fortran					
E. Advantages and disadvantages of assembler languages					
F. COBOL					
G. Writing instructions in COBOL					
H. Structure of a COBOL program					
I. Advantages and disadvantages of COBOL					
J. PL/I					
K. Advantages and disadvantages of PL/I					
L. RPG					
M. Advantages and disadvantages of RPG					
N. BASIC					
O. Advantages and disadvantages of BASIC					
P. PASCAL					

COMPUTER PROGRAMMING

TOPIC				COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1 Very Important	2 Somewhat Imp.	3 Not Important		
MN. Post implementation evaluation					
NN. System maintenance					
OO. Major application for business systems					
PP. Order entry					
QQ. Inventory control					
RR. Accounts receivable					
SS. Accounts payable					
TT. General ledger					
UU. Payroll					
VV. Other business application systems					
11. PROGRAM DESIGN AND FLOW-CHARTING					
A. What is a program?					
B. Review of program specifications					
C. Program design					
D. Early design methodologies					
E. Flowcharting as a program design tool					
F. Problems with flow-chart designs					
G. Development of structured programming					
H. Sequence					
I. If-the-else					
J. Do while					
K. Expressing logic using pseudocode					
L. structured design					
M. Other design methodologies					
N. Egoless programming and structured walk-throughs					
O. Common design problems					

COMPUTER PROGRAMMING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
O. Presentation to management					
P. Phase 3 - System design					
Q. Designing the system output					
R. Defining the system output					
S. Determining the type of output media					
T. Designing the printed report					
U. Design of system input					
V. Design of system files and data base					
W. Design of system processing					
X. Design of system controls					
Y. Source document control					
Z. Input controls					
AA. Processing controls					
BB. Audit trail					
CC. Backup consideration					
DD. System design approval					
EE. Phase 4 - System development					
FF. Establish a project plan					
GG. Develop detailed programming specifications					
HH. Programming the system					
II. Phase 5 - Implementation and evaluation					
JJ. Converting to the new system					
KK. Direct conversion					
LL. Parallel conversion					

COMPUTER PROGRAMMING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
L. Distributed data processing					
M. Distributed data bases					
10. <u>SYSTEMS ANALYSIS AND DESIGN</u>					
A. The computer in the business organization					
B. The organization of the data processing department					
C. Job classifications in data processing					
D. The data processing department and the company structure					
E. The data base administrator					
F. Job duties in distributed processing systems					
G. Introduction to systems analysis and design					
H. Conducting a system project					
I. Phase 1 - Initiation of the system project and the preliminary investigation					
J. The preliminary investigation					
K. Phase 2 - Detailed system investigation and analysis					
L. Detailed system investigation					
M. Documentation of the facts					
N. Analysis of present system					

COMPUTER PROGRAMMING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
W. Point-to-point lines					
X. Multidrop or multi-point lines					
Y. Establishing point-to-point contact					
Z. Establishing multidrop line contact					
AA. Addressing					
BB. Star networks					
CC. Ring networks					
DD. Multiplexers					
EE. Concentrators					
FF. A sample network					
GG. Computer operation and data communications					
HH. Interrupts					
II. Multiprogramming					
JJ. Multiprogramming and data communication					
KK. Regulations of carriers					
LL. Control over access to data					
MM. Conclusion					
9. DATA BASE AND DISTRIBUTED DATA PROCESSING					
A. Data base concepts					
B. Data base					
C. Building a data base					
D. Hierarchical data base					
E. Network data base					
F. Accesing the data base					
G. Comparison-data base vs. flat files					
H. Query languages					
I. Data base usage					
J. Advantages of data base systems					
K. Disadvantages of data base systems					

COMPUTER PROGRAMMING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
W. Point-to-point lines					
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H. Query languages					
I. Data base usage					
J. Advantages of data base systems					
K. Disadvantages of data base systems					

COMPUTER PROGRAMMING

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
7. AUXILIARY STORAGE AND FILE ORGANIZATION					
A. Magnetic tape					
B. Storing data on mag- netic tape					
C. Format of records stored on tape					
D. Magnetic tape					
E. Modern direct access storage devices					
F. Storing data on mag- netic disks					
G. Tracks on recording surfaces					
H. Physical organization of data on magnetic disks					
I. Accessing data stored on magnetic disks					
J. Mass storage devices					
K. Magnetic bubble mem- ory					
L. Access to data stored on auxiliary storage					
M. Sequential access					
N. Random access					
O. Processing data on auxiliary storage					
P. Data retrieval					
Q. File updating					
R. Sequential file up- dating					
S. Random file updating					
T. File organization					
U. Sequential file organ- ization					
V. Relative or direct file organization					
W. Indexed file organiza- tion					

COMPUTER PROGRAMMING

TOPIC	Very Important 1	Somewhat Imp. 2	Not Important 3	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
X. Editing input data Y. Data input systems Z. Dedicated and specialized input devices					
6. OBTAINING OUTPUT FROM THE COMPUTER					
A. Printed output B. Printing characters on the report C. Impact printers D. Non-impact printers E. Printer speed classifications F. Low speed printers G. High speed printers H. Very high speed printers I. Selecting a printer J. Displayed output K. CRT terminals L. Type of display control M. Output from computer systems N. External vs. internal output O. Presentation of output information P. Detailed printed reports Q. Summary reports R. Exception reports S. User considerations for printer reports T. Transaction-oriented output U. Output considerations in a transaction-oriented system V. Output can take many forms					

COMPUTER PROGRAMMING

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
5. INPUT TO THE COMPUTER SYSTEM					
A. Source data					
B. Entering data into the computer					
C. Reliability of input data					
D. Batch processing					
E. Punched cards					
F. Card and input record design					
G. Designing an input record					
H. Recording data on a punched card					
I. The keypunch					
J. Verification of data					
K. Reading punch cards into main computer storage					
L. The processing cycle					
M. An evaluation of punched cards					
N. Magnetic tape data recorder					
O. Diskette-based data entry devices					
P. Key-to-disk shared processor systems					
Q. Local job entry					
R. Remote job entry					
S. Transaction-oriented processing systems					
T. Uses for transaction-oriented processing systems					
U. Computer terminals					
V. Intelligent terminals					
W. The processing cycle-transaction-oriented processing systems					

COMPUTER PROGRAMMING

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
M. Logical operation					
N. Comparing--equal condition					
O. Comparing--less than condition					
P. Comparing--greater than condition					
Q. Storing data					
R. Processing application on a computer system					
4. <u>THE PROCESSOR UNIT</u>					
A. How is data stored?					
B. Extended binary coded decimal interchange code (EBCDIC)					
C. Representing numeric values in storage					
D. Representing alphabetic data in storage					
E. Storing special characters					
F. Size of main computer storage					
G. Addressable storage					
H. Storing fields					
I. Manipulating data in main computer storage					
J. Use of main computer storage					
K. Computer instructions					
L. The central processing unit					
M. Executing instruction on a computer					
N. Fixed word length machines					
O. The manufacture, and types of storage					

COMPUTER PROGRAMMING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
EE. Are computers really worth it?					
FF. Unreliable programs					
GG. Some did not survive					
HH. Evolutionary growth (1970-1975)					
II. Computers learn to communicate					
JJ. Social issues become a concern					
KK. Computer crime and fraud					
LL. The economic slowdown					
MM. The development of microelectronics					
NN. The era of the micro-processor					
OO. The new world of computers (1975-present)					
PP. The application of the computer in modern society					
<u>3. PROCESSING DATA ON A COMPUTER SYSTEM</u>					
A. Data organization					
B. Input					
C. Processing					
D. Output					
E. The basic processing cycle					
F. Basic processing					
G. Input/output operations					
H. A sample application					
I. Input/process/output					
J. Processing the remaining records in the input file					
K. Arithmetic operations					
L. Input/process/output					

COMPUTER PROGRAMMING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
H. A public becomes aware					
I. The giant awakens					
J. A period of development and competition					
K. An emerging industry					
L. The problem of programming					
M. Symbolic programming becomes possible					
N. High level programming becomes possible					
O. New programming languages are developed					
P. Business programming follows suit					
Q. The second generation is born (1958-1964)					
R. Computer revolution					
S. A myriad of machines					
T. A world of competition					
U. A most important announcement--the IBM System 360					
V. Solid logic technology					
W. Problems with the System/360--program incompatibility					
X. Problems with operating systems					
Y. The reaction to the System/360					
Z. The heydays of the late 60's (1965-1970)					
AA. The demand for trained personnel					
BB. An expanding industry					
CC. The software industry is born					
DD. The minicomputer emerges					

PROGRAM TITLE COMPUTER PROGRAMMING

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. <u>INTRODUCTION TO THE COMPUTER</u>					
A. What is a computer?					
B. What does a computer do?					
C. What is data?					
D. Data input, processing and output					
E. Computer programs					
F. A typical application					
G. Computer console					
H. Input devices					
I. Output devices					
J. Auxiliary storage					
K. The computer system					
L. Tape library					
M. Data entry					
N. Bursting and decollating					
O. Computer programmers					
P. Department management					
Q. The computer user					
2. <u>EVALUATION OF THE ELECTRONIC COMPUTER INDUSTRY</u>					
A. How did it all begin?					
B. Mauchly and Eckert begin work					
C. ENIAC					
D. The work of John Von Neuman					
E. The stored program concept					
F. The first stored program computer					
G. The business of computers begins (1950-1955)					

GRAPHICS

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. <u>SAFETY</u>					
A. General safety in the shop					
B. Powered equipment					
1. pinch and nip points on printing presses					
2. paper cutting procedures					
C. Solvents and chemicals					
1. storage					
2. labeling					
3. handling					
4. good housekeeping					
D. UOCHA regulations					
1. fire hazards					
2. proper working conditions					
3. accident reporting					
E. Class policies					
2. <u>LEADERSHIP</u>					
A. Personal definition of leadership					
B. Identification of leadership skills					
C. Purposes of group membership					
3. <u>INTRODUCTION TO THE GRAPHIC ARTS INDUSTRY</u>					
A. Evolution of the graphic arts industry					
1. evolution of the graphic arts industry					
2. kinds of business making up the industry					
3. problems associated with the industry					
B. Major printing processes					
C. Master plan					

GRAPHICS

TOPIC	Very Important 1	Somewhat Imp. 2	Not Important 3	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
4. <u>COPY PREPARATION</u>					
A. Layout techniques					
B. Graphic arts measurements					
5. <u>COMPOSITION</u>					
A. Impact type					
B. Kinds of type					
C. Proofreading					
D. Fundamentals of type-setting					
1. manuscript markup and copyfitting methods					
2. organization of type					
3. distinguishing characteristics/selection of typefaces					
4. type-composition terminology					
5. physical figuration					
6. font storage					
7. photographic media					
8. density control					
9. work station-keyboard arrangement and use of					
10. utility setup procedures/startup					
11. file management and typesetting					
12. data entry/editing					
13. preparation of copy for typesetter					
14. processing exposed paper					
15. care and maintenance of the typesetter/processor (spacing, leading, guidelines, proportional spacing, justification)					

GRAPHICS

TOPIC	Very Important 1 Somewhat Imp. 2 Not Important 3	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
6. <u>PREPARATION FOR PROCESS PHOTOGRAPHY</u> A. Darkroom safety B. Parts of a camera C. Common darkroom procedures D. Types of film and their uses E. Handling and storing of film F. Darkroom use and arrangement G. Cleanliness H. Copy preparation I. Copy considerations J. Cropping, scaling and registration K. Making the paste-ups L. Line photography 1. exposing and processing a line negative M. Exposure calculations for a halftone negative N. Exposing and processing a halftone negative O. Contact printing P. Diffusion transfer			
7. <u>SCREEN PRINTING</u> A. Introduction to screen printing B. Industrial equipment and methods of production C. Hand screen printing equipment D. Safety E. Building screen printing equipment or replacing fabrics F. Artwork for screen printing			

GRAPHICS

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
G. Direct photographic screen					
H. Indirect and direct/indirect photographic and capillary action films					
I. Masking nonprinting areas					
J. Screen printing operations					
K. Multi-color screen printing					
L. Cleanup					
8. <u>LITHOGRAPHIC IMPOSITION</u>					
A. Introduction to lithographic imposition					
B. Tools and materials					
C. Preparation and layout for stripping					
D. Attaching negatives to the masking sheet					
E. Combining negative line copy and halftone illustrations					
F. Double burns, multiple impositions					
G. Proofing					
9. <u>LITHOGRAPHIC IMAGE CARRIERS</u>					
A. Introduction to lithographic image carriers					
B. Types of plates					
C. Exposing presentized plates					
D. Diffusion transfer, direct image and 1-step photographic plates					
E. Correcting, preserving and storing of plates					
F. Troubleshooting plate-making problems					

GRAPHICS

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
10. <u>BLACK AND WHITE 35mm PHOTOGRAPHY</u>					
A. Introduction to photography					
B. Review of safety					
C. The camera					
D. Photographic films					
E. Making the exposure					
F. Film processing					
G. Photographic papers					
H. Photographic printing					
I. Finishing and mounting prints					
11. <u>OFFSET LITHOGRAPHY</u>					
A. Safety review					
B. Introduction to presswork					
C. Presswork					
D. Lithography press vs. duplicators					
E. Preparing the offset duplicator					
F. Operation of offset duplicator/press					
G. Adjustments to the duplicator					
H. Troubleshooting					
I. Cleaning and maintaining the offset system					
12. <u>GRAVURE PRINTING</u>					
A. Introduction to gravure					
B. Gravure image carries					
C. Gravure presses					
D. Web offset					
13. <u>THERMOGRAPHY</u>					
A. Thermography					

GRAPHICS

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
14. <u>FINISHING AND BINDING</u>					
A. Introduction to finishing and binding					
B. Finishing methods					
C. Paper cutting prodedures					
D. Basic binding methods					
E. Softcover binding					
F. Operation of collating machine					
15. <u>PULP AND PAPER MANUFACTURING</u>					
A. Introduction to pulp and paper manufacturing					
B. Making paper by hand					
C. Pulp manufacturing					
D. Paper manufacturing					
E. Kinds, weights and sizes of paper					
F. Buying and finding the cost of paper					
16. <u>PRINTING INK MANUFACTURING</u>					
A. Introduction to printing inks					
B. Formulation of printing inks					
C. Manufacture of printing ink					
D. Kinds of printing inks					
E. Troubleshooting ink problems					
F. Mixing printing inks					

GRAPHICS

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
17. <u>ETHICS AND LEGAL CONSIDERATIONS FOR PRINTERS</u>					
A. Legal restrictions of printed materials production					
B. Pornography					
C. Counterfeiting					
D. Moral and ethical considerations					
18. <u>CAREER OPPORTUNITIES</u>					
A. Introduction to careers in Graphic Communications					
B. Apprenticeship					
C. Earnings					
D. Opportunities					
E. Interview and internship					
19. <u>THE GREAT JOB HUNT</u>					
A. Resume					
B. Portfolio					
C. Mock interviews					
D. Letter of recommendation					
E. Transcripts					
F. Daily plan of action					
G. WOIS					
H. State employment computer aide					

MACHINE TRADES

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
1. <u>SAFETY</u>					
A. Personal					
B. Shop					
C. Machine tool supply					
2. <u>STUDENT LEADERSHIP</u>					
A. Leadership					
B. Personal growth					
C. Developing					
3. <u>USE, CARE AND MAINTENANCE OF MACHINE TOOLS</u>					
A. Identification					
B. Care and maintenance safety					
4. <u>MATH CONCEPTS RELATED TO MACHINE TRADE MEASUREMENT</u>					
A. Rules-types, reading care					
B. Micrometer caliper- types, reading, care					
C. Vernier measuring tools					
D. Gauges					
E. Optical comparator					
5. <u>BULEPRINT READING</u>					
A. Dimensions					
B. Materials					
C. Finishes					
D. Tolerances					
E. Quantity of units					
F. Scales drawings					
G. Assembly or sub- assembly					
H. Revisions					

MACHINE TRADES

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
6. <u>JOB LAYOUT AND SETUPS</u>					
A. Making lines on metals					
B. Squares					
C. Measuring angles					
D. Steps in making a layout					
7. <u>SAW CUTTING OPERATIONS</u>					
A. Reciprocating power hacksaw					
B. Horizontal band saw					
C. Circular type metal cutting saws					
8. <u>LATHE OPERATIONS</u>					
A. Safety					
B. Lathe					
C. Driving the lathe					
D. Holding and rotating the work					
E. Holding, moving and guiding cutting tool					
F. Cleaning					
G. Cutting tools and tool holders					
H. Boring on the lathe					
I. Drilling and reaming					
J. Knurling					
K. Filing and polishing					
L. Mandrels					
M. Grinding					
N. Milling on the lathe					
O. Special lathe attachments					
P. Industrial application on the lathe					

MACHINE TRADES

TOPIC	Very Important	Somewhat Imp.	Not Important	COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
9. <u>MILLING OPERATIONS</u>					
A. Safety					
B. Types					
C. Milling cutters					
D. Methods of cutting					
E. Cutting speeds and feeds					
F. Work holding attachments					
G. Milling operations					
H. Industrial application					
10. <u>SHAPING OPERATIONS</u>					
A. The shaper					
B. How to mount work					
C. Adjusting shaper for cutting					
D. Adjusting and positioning stroke					
E. Machining an angular surface					
F. Contour a form cutting					
G. Other operations					
H. Cutting speed and feed					
I. Cutting tools					
J. Industrial application					
11. <u>DRILLING OPERATIONS</u>					
A. Drills-type, measuring, parts, sizes, use					
B. Work holding devices --vises, V-block, T-bolts, strap, clamps					

MACHINE TRADES

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
C. Cutting speeds and feed					
D. Sharpening drills					
E. Drilling holes					
F. Other operations					
G. Safety					
12. <u>BORING</u>					
A. In mills, lathes and drill presses					
13. <u>SURFACE GRINDING</u>					
A. Surface grinders- purpose, types					
B. Grinding wheels					
C. Cutting fluids					
D. Grinding applica- tions					
14. <u>METAL</u>					
A. Metal character- istics					
B. Metal finishes					
C. High energy rate forming					
15. <u>BEING EMPLOYABLE</u>					
A. Resume					
B. Dress					
C. Communication skills					
D. Interviews					
E. Qualities of a good worker					
F. Understanding the follow-up and place- ment procedure					
G. Proper work atti- tudes and habits					

MACHINE TRADES

TOPIC	Very Important Somewhat Imp. Not Important			COMMENTS/ADDITIONS	IMPORTANT 6 YRS. (X)
	1	2	3		
H. Personal pride in skills and craftsmanship					
I. Reliability in completion of assigned responsibilities					

SURVEY SYSTEM PROGRAM

**Business And System Information
Consulting Service
(BASICS)**

West 3005 Bismark
Spokane, Washington 99205
(509) 327-1276

Survey System General Analysis

Presented By: G. Howlett, CDP
January 21, 1985

Problem Definition/Need:

Some type of automated system is needed to process, statistically, surveys from various sources. That process will require the capability to allow the following:

1. Multiple Input Files;
2. EDITING For "Reasonable Correctness";
3. Correction of Incorrect Surveys;
4. The Merging of Multiple Edited Input Files Into One File;
5. Creation of Actual Number Statistics;
6. Creation of Percent Statistics;
7. Creation of Selectable Criteria Percentage Statistics.

Proposed SYSTEM Solution:

A five-phase approach to accommodating the above need is recommended. The phases are as follows:

1. Create a Question File;
2. Create Transaction File(s);
3. Merge Transaction File(s);
4. Create Statistics File;
5. Create Various Reports.

Proposed SYSTEM Limitations:

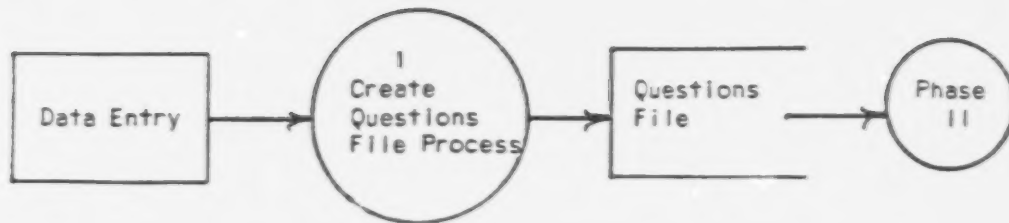
Due to the machine required to execute this system (TRS 80-Model 4), the number of total surveys is limited to 2500.

The questionnaire will be limited to 50 questions due to memory restrictions of the machine.

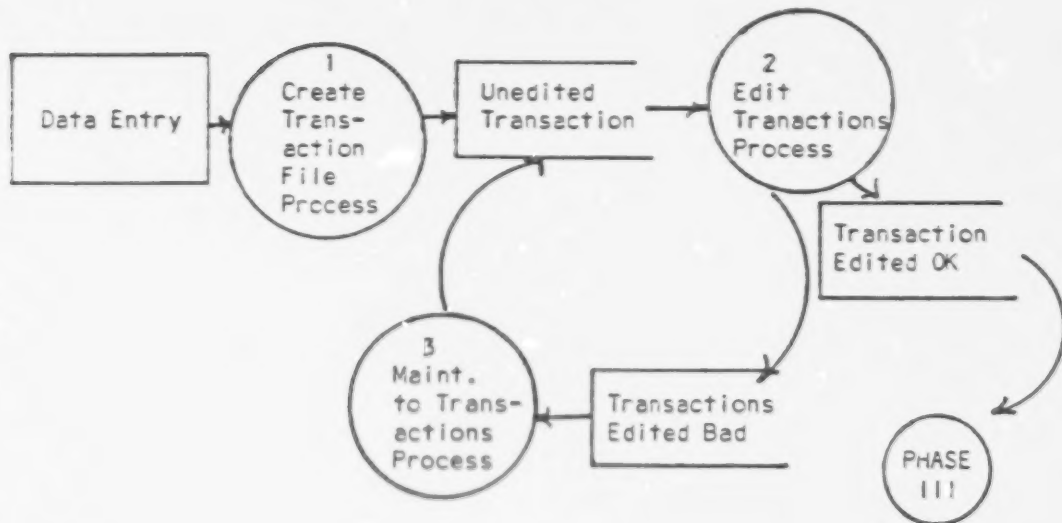
A maximum of 20 answers per question will be allowed due to limited print-line capabilities (132 characters) for reports.

Proposed System Flow

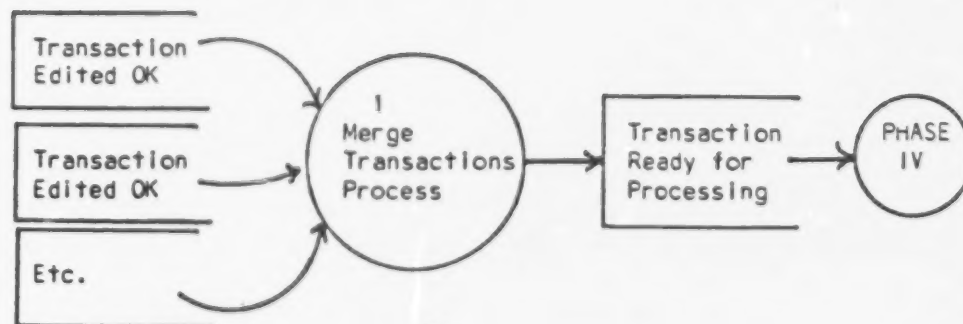
PHASE I.



PHASE II. (Many Disketts/Data Entry Personnel)

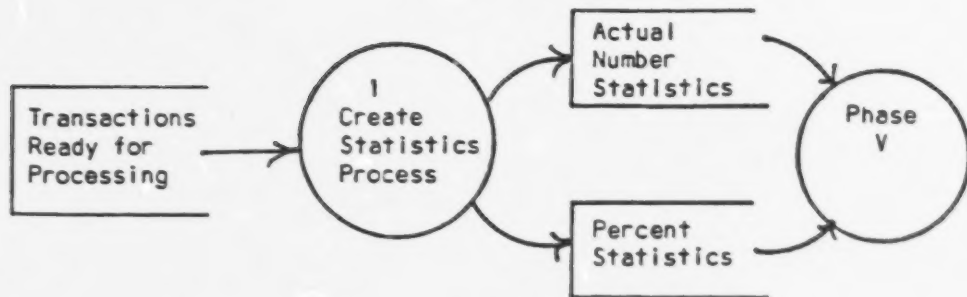


PHASE III.

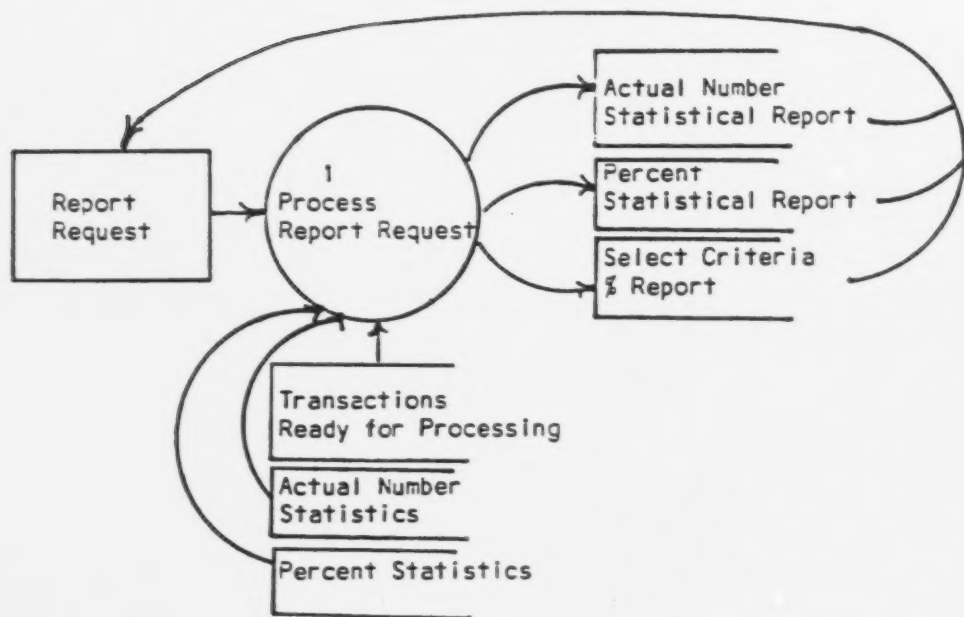


Proposed System Flow (continued)

PHASE IV.



PHASE V.



EXPECTATIONS OF THE SURVEY SYSTEM

Listed below are the information expectations that the survey system will and will not provide for the end user.

INFORMATION THAT WILL BE PROVIDED

1. Numerical statistics for each question and answer.
 - A. Numerical quantity of each answer within each question.
 - B. Percent of each answer based upon the numerical quantity in A.
2. A method of selecting various questions and answers and receiving :
 - A. Total number of surveys.
 - B. Total number of surveys which met the selection criteria.
 - C. The percent that item B represents.

INFORMATION THAT WILL NOT BE PROVIDED

1. On the following pages, there are suggestions of possible reports that could be placed on a "spreadsheet" type of program for more specific information. The data that the "spreadsheet" program may require may or may not be obtained from the use of the Survey System. Some of the information may have to be computed by hand and placed into the "spreadsheet" program due to the resources required for the particular calculation.

BEST COPY AVAILABLE

POSSIBLE USES OF DATA TAKEN FROM THE SURVEY SYSTEM
THAT CAN BE PLACED ON A SPREADSHEET PROGRAM FOR MORE INFORMATION

1. How well was the survey utilized? (rate of return)

SCHOOL	NUMBER OF SURVEYS SENT	NUMBER OF SURVEYS RETURNED	PERCENT
C.V.	XXX	XXX	XX
UNIVERSITY	XXX	XXX	XX
ETC.			

2. Grade at which you heard about the program (by school).

GRADE	NUMBER	PERCENT
8	XXX	XX
9	XXX	XX
10	XXX	XX
11	XXX	XX

3. Who influenced your trust? (by school)

GROUP	NUMBER	MEAN
PARENTS	XXX	XX
FRIENDS	XXX	XX
ETC.	XXX	XX

4. Who influenced you to enroll? (by school)

GROUP	NUMBER	MEAN
PARENTS	XXX	XX
FRIENDS	XXX	XX
ETC.	XXX	XX

5. What methods of influence were used in your school to make you aware of the Skills Center? (by school)

TYPE	NUMBER	PERCENT	MEAN
BROCHURE	XXX	XX	XX
VIDEO TAPE	XXX	XX	XX
SLIDES	XXX	XX	XX
ETC.	XXX	XX	XX

6. What methods were used to enroll you? (by school)

METHOD	NUMBER	PERCENT
APPLICATION	XXX	XX
COUNSELOR	XXX	XX
MEETINGS	XXX	XX
ETC.	XXX	XX

POSSIBLE USES OF DATA TAKEN FROM THE SURVEY SYSTEM
 THAT CAN BE PLACED ON A SPREADSHEET PROGRAM FOR MORE INFORMATION
 (continued)

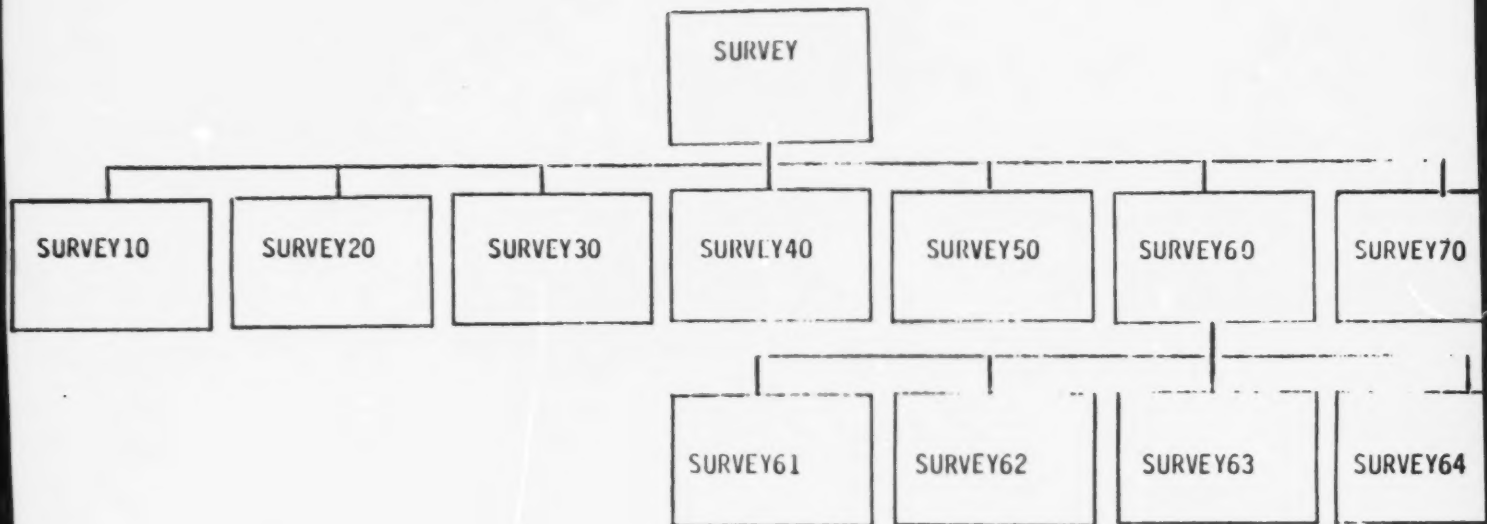
7. When should you first hear about the Skills Center?
 (in students view? by school)

GRADE	NUMBER	PERCENT
7	XXX	XX
8	XXX	XX
9	XXX	XX
10	XXX	XX
11	XXX	XX

8. What type of program would you like to take next year? (by school)

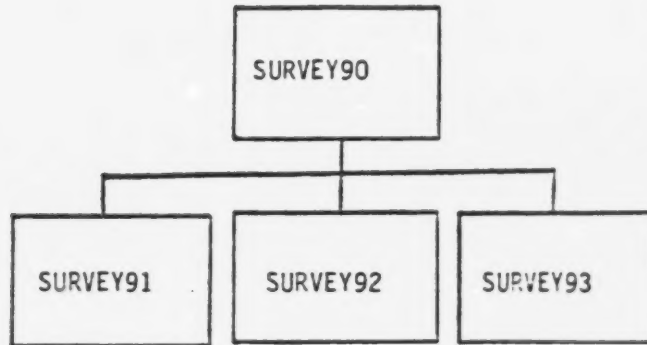
PROGRAM	NUMBER	MEAN	PERCENT
DATA ENTRY	XXX	XX	XX
BROADCASTING	XXX	XX	XX
WELDING	XXX	XX	XX
ETC.	XXX	XX	XX

SURVEY SYSTEM



- SURVEY - Main Menu
- SURVEY10 - Init. the transaction diskett
- SURVEY20 - Create the questions file
- SURVEY30 - Maint. to the questions file
- SURVEY40 - Merge the transactions files
- SURVEY50 - Create the stats file
- SURVEY60 - Reports main menu
- SURVEY61 - Print Numerical Analysis
- SURVEY62 - Print Percentage Analysis
- SURVEY63 - Print Survey Analysis
- SURVEY64 - Selective Analysis
- SURVEY70 - General survey operations instnctions

SURVEY SYSTEM



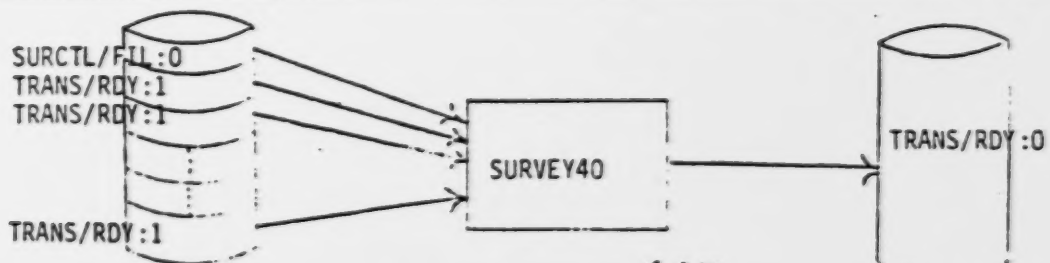
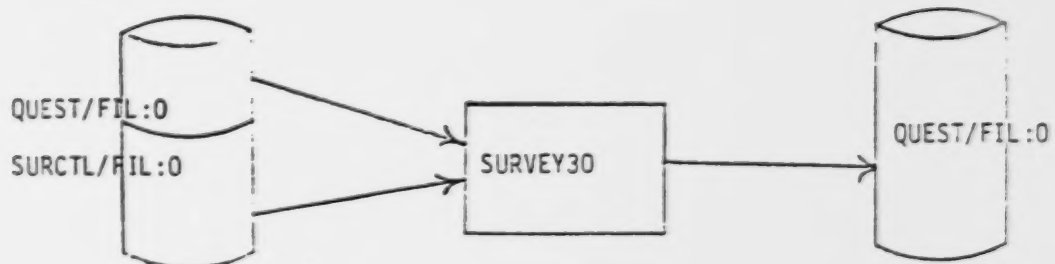
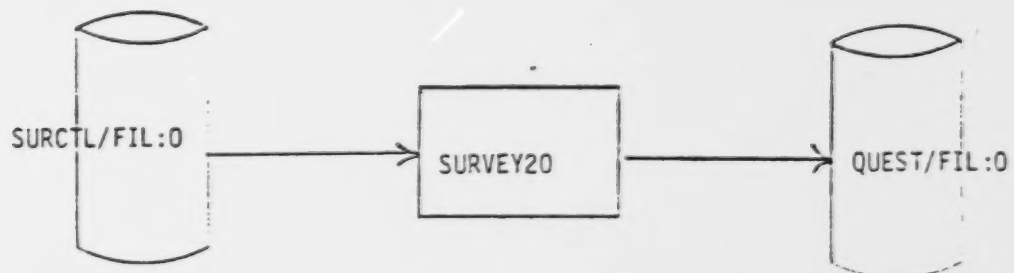
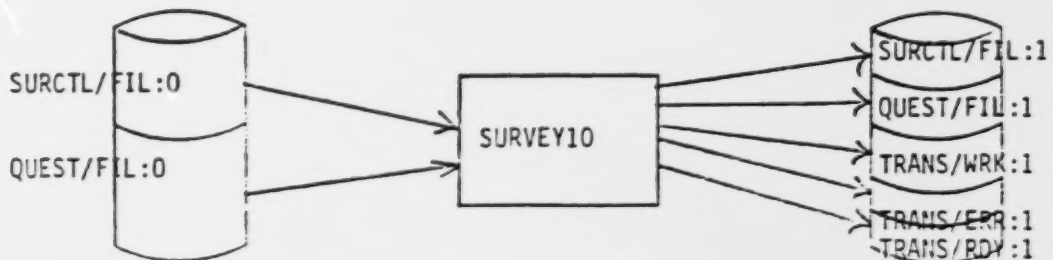
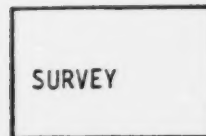
SURVEY90 - Data entry main menu

SURVEY91 - Create transaction file

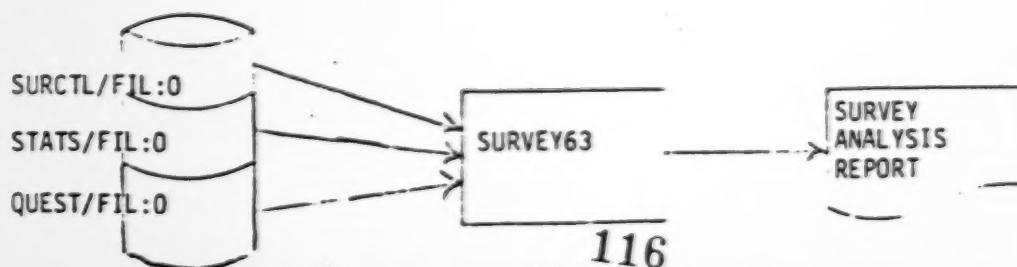
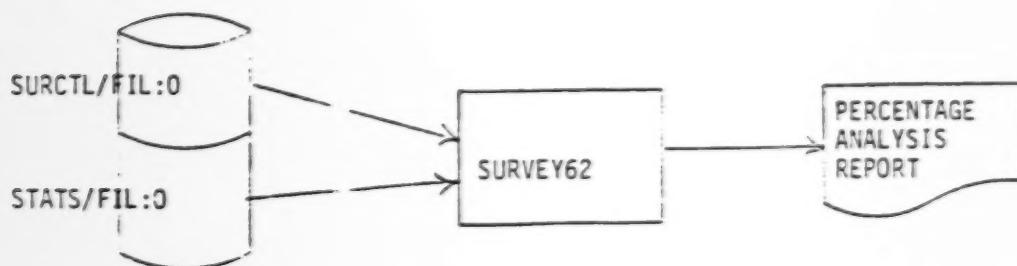
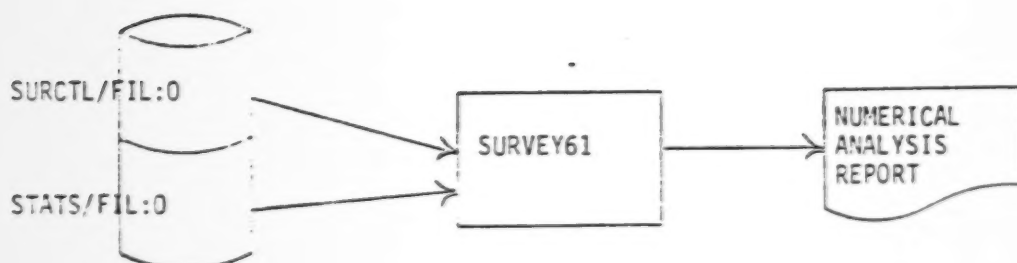
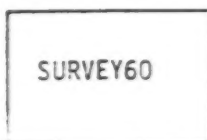
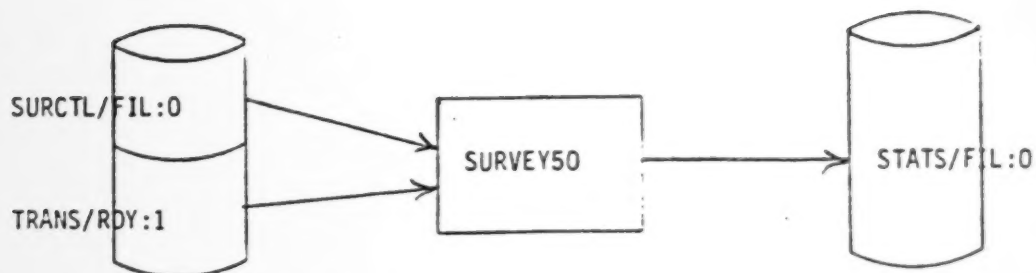
SURVEY92 - Edit transaction file

SURVEY93 - Maint. to transaction file

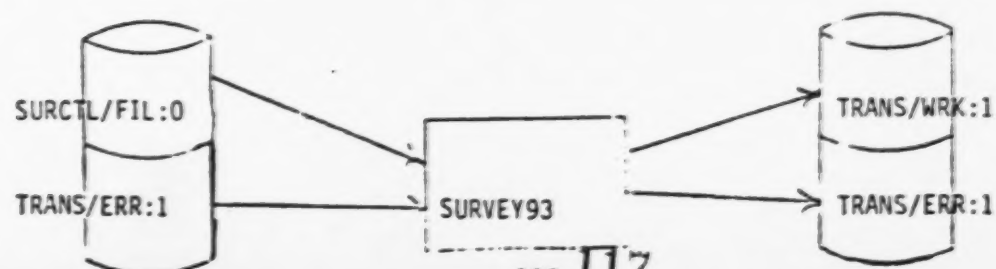
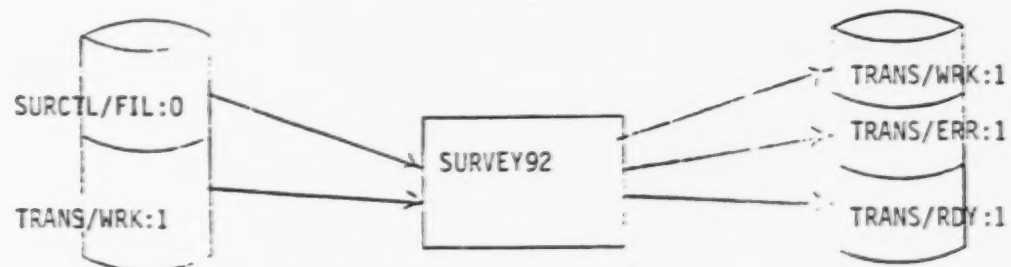
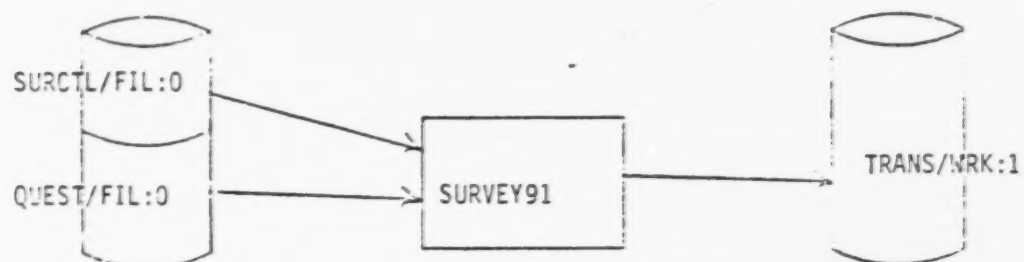
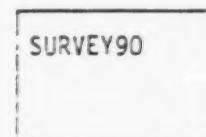
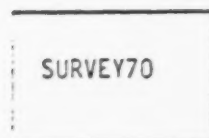
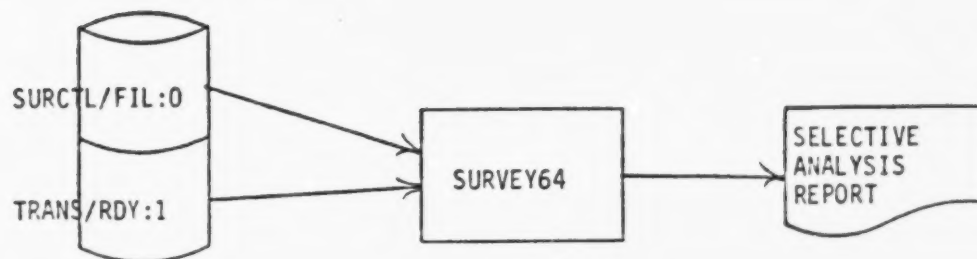
SURVEY SYSTEM
DATA FLOW DIAGRAMS



SURVEY SYSTEM
DATA FLOW DIAGRAMS



SURVEY SYSTEM
DATA FLOW DIAGRAMS



SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY

DESCRIPTION: Main menu of the survey system.

NOTES:

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY10

DESCRIPTION: Initilize the transaction diskett (survey data).

NOTES: The diskett placed into DRIVE 1: must be formatted. Five files are placed onto the diskett.

1. A copy of the QUEST/FIL.
2. The number entered as the starting number into the SURCTL/FIL.
3. Preformatted (NULL) TRANS/WRK.
4. Preformatted (NULL) TRANS/ERR.
5. Preformatted (NULL) TRANS/RDY.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY20

DESCRIPTION: Create the questions file (QUEST/FIL).

NOTES: The user is prompted for the question(s) and all the answers for each question in the survey. These are then written out to the QUEST/FIL to be used by various other programs.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY30

DESCRIPTION: Maintenance to the questions file (QUEST/FIL).

NOTES: User is prompted for the question number and the answer number for maintenance purposes. If the answer number is null or zero the question is displayed for maintenance, otherwise the appropriate answer is displayed. The user now enters the new question/answer as appropriate. At the completion of the maintenance the entire questions file is re-written. A listing may also be produced to display the entire survey prior to doing any maintenance.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY40

DESCRIPTION: Merge the transactions file (TRANS/RDY).

NOTES: All TRANS/RDY files from all the data entry transaction disketts are merged into one TRANS/RDY file for futher processing.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY50

DESCRIPTION: Create the stats file (STATS/FIL).

NOTES: The stats file is one large table consisting of the question number; actual count of the number of surveys that answered each question by answer; and the percent of this count in relationship to the entire survey scope. The TRANS/RDY file from SURVEY40 is used as input to create this table.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY60

DESCRIPTION: Main menu for the report selection.

NOTES:

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY61

)

DESCRIPTION: Print Numerical Analysis.

NOTES: Utilizing the STAT/FIL as input the report will be produced.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY62

DESCRIPTION: Print Percent Analysis.

NOTES: Utilizing the STAT/FIL as input the report will be produced.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY63

)

DESCRIPTION: Print Survey Analysis.

NOTES: Both the STAT/FIL and the QUEST/FIL are combined to create
this report.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY64

DESCRIPTION: Selective Analysis

NOTES: There are 3 steps to utilizing this program:

1. Obtain the selection criteria.
2. Process the entire TRANS/RDY transaction file adding to accumulators those surveys that matched the selection criteria.
3. Produce the printed report.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY70

DESCRIPTION: Instructions for the use of the survey system.

NOTES: These are only the general steps to take to process a survey.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY90

DESCRIPTION: Main menu for processing transactions (data entry of the
surveys).

NOTES:

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY91

)

DESCRIPTION: Create the transaction (data from surveys) file (TRANS/WRK).

NOTES: Additions as well as creating the file for the first time is accomplished in this program. No editing is performed in this program. A blank will be converted to a "Z" (meaning no answer) in another program for later processing.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY92

DESCRIPTION: Edit Transactions.

NOTES: Only a range check is done here which is based upon the number of answers created when the questions file was created. All blank answers are treated as a "Z" (meaning no answer). Valid surveys are written (or extended) to the TRANS/RDY file and invalid surveys are written (or extended) to the TRANS/ERR file. The TRANS/WRK file is set to null (empty). An error listing is also produced.

SURVEY SYSTEM
PROGRAM DOCUMENTATION

PROGRAM: SURVEY93
)

DESCRIPTION: Maintenance to the transaction file.

NOTES: The TRANS/ERR file is processed here. Each survey in error is displayed upon the screen and should be fixed at this time. These "fixed" surveys will need to be re-edited (SURVEY92) in order to be placed onto the TRANS/RDY file.

SURVEY SYSTEM
FILE LAYOUTS

) FILENAME : SURCTL/FIL

FIELD NUMBER	DESCRIPTION
1	SURVEY NUMBER
2	NUMBER OF QUESTIONS IN THE SURVEY
3	STARTING SURVEY NUMBER FOR THIS DISKETT

SURVEY SYSTEM
FILE LAYOUTS

FILENAME : QUEST/FIL

)

FIELD NUMBER	DESCRIPTION
1	QUESTION NUMBER
2	QUESTION
3 - 22	ANSWERS TO QUESTIONS
23	LAST VALID ANSWER (USED FOR EDITING)

SURVEY SYSTEM
FILE LAYOUTS

FILENAME : STATS/FIL

FIELD NUMBER	DESCRIPTION
1	ANSWER (A) COUNT
2	ANSWER (A) PERCENT
3	ANSWER (B) COUNT
4	ANSWER (B) PERCENT
ETC...	ETC....
39	ANSWER (T) COUNT
40	ANSWER (T) PERCENT
41	ANSWER (Z) COUNT
42	ANSWER (Z) PERCENT

SURVEY SYSTEM
FILE LAYOUTS

FILENAME : TRANS/RDY TRANS/WRK TRANS/ERR

FIELD NUMBER	DESCRIPTION
1	SURVEY NUMBER
2	QUESTION NUMBER
3	ANSWER

SURVEY SYSTEM
STEP BY STEP UTILIZATION

STEP DESCRIPTION
=====

1. Format a blank diskett and label it "TRANSACTION MASTER".
 2. Copy the following programs to that diskett:
 SURVEY90 SURVEY91 SURVEY92 SURVEY93
 3. Repeat steps 1 and 2 for each person that will be entering data.
 4. Create the Questions file (SURVEY20).
 5. If necessary, do maintenance to the Questions file (SURVEY30).
 6. Initialize each diskett that was created in step 1 and 2 by running
 SURVEY10. NOTE : Remember to number the surveys!!!!!!!
 SURVEY10 will ask for a starting survey number
 and you will need to know what to answer.
 7. Enter the survey data. (SURVEY90)
 8. Edit the surveys. (SURVEY92)
 9. Do any maintenance to the surveys. (SURVEY93)
 10. If there were any surveys in step 9, go to step 8.
 11. Merge the transactions (edited surveys). (SURVEY40) (OPTIONAL)
 12. Create the stats file. (SURVEY50)
 13. Print the reports whenever you like, in any order. (SURVEY60)
- NOTE : At any time SURVEY70 will display the general instructions
 about how to use this system.

COMPUTER RESPONSE

YOUR ACTION

STEP 1: CREATE THE QUESTIONS FILE

- | | |
|--------------------------|--|
| 1. | Place System MASTER diskette into drive :0 |
| 2. | BASIC <RK> |
| 3. How many files? | <RK> |
| 4. Memory size? | <RK> |
| 5. > | LOAD "SURVEY/BAS",R |
| 6. The main menu appears | Select #1 (Create the Questions fil |
| 7. | Follow the prompts |

Step 2: INITILIZE THE SURVEY DATA DISKETTE(S)

- | | |
|--------------------------|--|
| 1. | Place System MASTER diskette into drive :0 |
| 2. | BASIC <RK> |
| 3. How many files? | <RK> |
| 4. Memory size? | <RK> |
| 5. > | LOAD "SURVEY/BAS",R |
| 6. The main menu appears | Select #2 (Create the Survey Data diskette(s)) |
| 7. | Follow the prompts |

Step 3: ENTER THE SURVEY DATA

- | | |
|---------------------|--|
| 1. | Place a SURVEY DATA diskette into drive :0 |
| 2. | BASIC <RK> |
| 3. How many files? | <RK> |
| 4. Memory size? | <RK> |
| 5. > | LOAD "SURVEY90/BAS",R |
| 6. The menu appears | CREATE the Survey data file |
| 8. | EDIT the survey file |
| 9. | MAINTENANCE the survey file |

note: Continue EDIT/MAINT sequence until there are no errors in the EDIT. Always finish with the edit function

COMPUTER RESPONSE

YOUR ACTION

Step 4: CREATE THE STATS FILE

- | | |
|--------------------------|--|
| 1. | Place System MASTER diskette into drive :0 |
| 2. | BASIC <RK> |
| 3. How many files? | <RK> |
| 4. Memory size? | <RK> |
| 5. > | LOAD "SURVEY/BAS",R |
| 6. The main menu appears | Select #5 (Create the Stats file) |
| 7. | Follow the prompts |

Step 5: PRODUCE REPORTS

- | | |
|--------------------------|--|
| 1. | Place System MASTER diskette into drive :0 |
| 2. | BASIC <RK> |
| 3. How many files? | <RK> |
| 4. Memory size? | <RK> |
| 5. > | LOAD "SURVEY/BAS",R |
| 6. The main menu appears | Select #6 (Report menu) |
| 7. | Follow the prompts |